

RIDE STORIES

Hell of the Ashdown

Is this the south's toughest ride?

We ride the *Cheshire Cat* with a British
racing legend

GROUPTESTS

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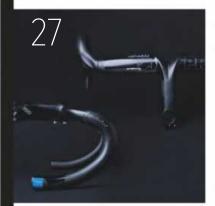






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January 2016 Cycling Active



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riders took part

in UKCE events

in 2015

new events

will add to

the UKCE's

expanding

roster in 2016



UK Cycling Events expands 2016 calendar

20 routes added to the roster for next year

lready the largest sportive organiser in Britain, UK Cycling Events (UKCE) will add another 20 routes to its event roster for 2016 meaning there'll be a whopping 70 to choose from.

Extending into the north of the UK and Scotland, UKCE will launch the brand new Black Series designed to "test the very best to their limit", alongside its Wiggle Super Series, Ordnance Survey Spin Series and our sister mag, Cycling Weekly's Sportive Series.

With 70,000 riders taking part in a UKCE event last year, we're seeing more riders lining up than ever before. So why are sportives becoming so popular?

There's something about riding with others and committing to an event that gets us riding further and faster than we would alone. Sean Perry says he's "motivated to ride longer distances by the other riders."

Meanwhile Kris Witherington says sportives offer him "a target and motivation" and as a newcomer to the sport it allows him to "explore new routes without getting lost!" Coeur Cycliste on Twitter added: "Knowing that I've committed to an event makes me go out training, without an event it's too easy to say 'I won't go out today." For the full range of 2016 UKCE events visit: www.ukcyclingevents.co.uk

"In the final week you can't really make yourself any fitter but you can ruin it all if you train too much"

Alex Dowsett, professional cyclist, Movistar Team

Editor's letter

New editor, new technology

've spent a good amount of time pondering how to open this letter, my first as editor. "What type of riding do you do?" is the typical question asked when you roll up alongside someone in a sportive or join a group of strangers on a club run.

I love riding bikes. Over the years I have given every type of riding a go, with varying degrees of success. From sportives to road racing, forays into cyclo-cross, track and an ill-fated and ill-advised attempt at downhill mountain bike riding, essentially if it's two wheels I have given it ago.

Cycling factors in pretty much every life decision I make. When buying a new house I spent time flicking between the estate agent's details, Strava and mapmyride trying to work out what would be a good loop from home and where the biggest hills were. When buying a new car I might look at fuel economy and engine capacity but the only real capacity I am interested in is the boot. Can I get two bikes and kit bags in without taking the front wheels off? Yes — I am sold. OK, I am sounding a bit obsessed, but I bet there is a bit of nodding in agreement from the back.

As a cyclist I still want to get fitter and faster. "Insanity is doing the same thing over and over again and expecting different results," said Albert Einstein, allegedly, although equally it could have been a cycle coach. I am as guilty of this as anyone. After 20 years of doing pretty much the same thing each winter, this year there is opportunity to do something very different. Something that didn't even exist last winter — virtual racing — but I'm not sure where I stand on this yet.

I'm incredibly fond of that twisted sense of fun that cyclists call suffering. Long winter rides, when your face is so full of mud that you can feel grit when you grind your teeth are amongst my most memorable times on a bike. However, the thought of being able to roll up to the start line and compete against cyclists from all over the world is very exciting. It will be racing that gets me hooked. Maybe this year I

Hannah Reynolds, Editor

will be flying by spring.

Jacket Thermal Windproof Breathable Water Repellent



Boardman's first SRAM eTap models



s Boardman announced a rebrand, its two new bikes available with SRAM eTap stole the show at its 2016 bike launch in London last month.

Possibly the most anticipated groupset release since the first Shimano electronic offering, eTap will feature on Boardman's SLR Endurance 9.9 and AiR 9.9. Alongside eTap, the new range will see a full complement of women's bikes including the Air, ATT, SLR Endurance and disc brake options.

WESAY Symon Lewis (tech editor)

"I was shocked at how much the Boardman range has grown, especially its women's section, suggesting the company foresees further growth in the market for women — which can only be a good thing. However, the exciting announcement that SRAM wireless could be incorporated soon overshadows everything else. It's potentially a radical change in the way we look at frame design."



HIGH-SPEED TRAIN PROVIDER DROPS BIKE-PACKING PLAN

CTC forces Eurostar to think 'outside the box'

Eurostar has dropped plans to make cyclist passengers dismantle and box their bikes, following a successful campaign by the Cyclists' Touring Club (CTC). When the high-speed train provider announced it would introduce the new rules, there was public outcry, and the CTC set to work.

Sam Jones, campaigns and communications coordinator at CTC explained: "We do listen to our membership on what they want and we started an investigation back in the late summer. Dialogue takes time, and we need to give people a chance to respond. There's a lot of work behind it, and although the campaigning team is small, we pack a punch."

More than 9,700 people signed up to the 'Zero stars for Eurostar' campaign spearheaded by CTC, the UK's largest cycling charity, and the ECF (European Cyclists' Federation).

Eurostar's head of EU public affairs Pierre Delalande wrote on email: "You will be pleased to know that we are not intending to go ahead with the requirement for all bikes to be carried in boxes and will accept fullymounted bikes."

CTC galvanised support from leading politicians on both sides of the Channel including Mayor of London Boris Johnson and the Mayor of Paris Anne Hidalgo.

CTC chief executive Paul Tuohy said: "It's fantastic news that the views of so many of our members and other cyclists across Europe have been listened to. This proves how a successful, well-run campaign can be a massive force for good and make things happen.

"We at CTC would like to thank everyone who supported our online action, as well as other cycling bodies across Europe, the APPCG, and the mayors of London and Paris."



















Gran Fondo Campagnolo Roma

Riding through the centre of Rome on closed roads was amazing, then we headed into the hills. Carabinieri on each junction waved us through.

Gary Barrett Time: 4hr 25min Distance: 76 miles Rider's rating





Spadger's Ride

The route was perfectly thought out, raising funds for two charities, CRY (Cardiac Risk in the Young) and the Dave Rayner Fund. Fun had all round whilst the entry fee when towards a good cause

Garry Russell Time: 3 hours Distance: 50 miles

Rider's rating



Ride of the Falling Leaves

This is a really challenging sportive with 1,500m of climbing over the 110km route. The best part of the ride, however, is the free meal and beer at the finish.

Matthew Parker Time: 4hr 19min Distance: 110km

Rider's rating



Ware's Essex?

The route was very good; it had some nice rolling hills on quiet roads and was very well marked out. I spent too much time eating cakes in the feed station.

Brian Holmes Time: 5hr Distance: 72 miles

Rider's rating



Rourkie's Cat and Fiddle Challenge

Nice to see Sean Kelly and Guy Martin out riding, more than happy to chat and share stories and photos with participants. Great charity support too for Cystic Fibrosis Care.

Maz Kaczmarczyk Time: 3hr 34min Distance: 55 miles

Rider's rating



Wiggle Circuit Breaker

A very scenic rolling route that deserved a higher difficulty rating than the 2.5/5 that Wiggle gave it. The climb to Burton County Park was rewarded with stunning views.

John Rodway Time: 6hr 48min Distance: 86 miles

Rider's rating



Lakeland Monster Miles

Normally a road cyclist, I decided to put myself out of my comfort zone and do some off-road riding within the security of an organised event. A cracking bike ride.

Kathryn Hopkirk Time: 4hr 18min Distance: 45 miles

Rider's rating

The Tour of Cambridgeshire







132 Km

8,000 Riders





For full details and to enter now go to: www.tourofcambridgeshire.com





Simon Mottram

Founder and chief executive of high-end cycle clothing brand Rapha on staying one step ahead

Initially I think the Rapha look captured attention and proved popular because it was in stark contrast to the garish and unflattering team kits on offer. When we launched in 2004 there really was no other brand offering pared down, elegant, flattering clothes. It was more than skin-deep too. We brought higher quality fabrics and trims that performed better as well.

Today our style has been widely copied, but I think it's still true that you can tell the difference in a Rapha product as soon as you pick it up. Most cyclists would rather wear high-performance clothing that makes them look good, while helping them perform better on the bike. That's still what we try to offer.

It's hard to make high performance clothing! Getting it right takes expertise and a lot of trial and error. It took us a long time to get our first bibshorts right but now they're among our top-selling products. There have been a few odd ideas along the way as well. We launched an 'Emergency Gilet' back in 2005 but its great looks couldn't hide the fact that taking it off over your head while riding was a touch risky...

We certainly don't expect to appeal to the personal styles of all riders. It's dangerous for brands to try to appeal to everyone; you end up meaning very little to anyone. Some people delight in being individuals and in shunning things that are mainstream. As we get larger this is likely to be a growing challenge for us.

Every September Rapha puts on a ride in support of an autism charity, Ambitious about Autism (my son is autistic). The ride is 350 kilometres/220 miles from Manchester to London, which we complete in a single day. That ride is about as challenging as I can handle, though it's entirely appropriate given how challenging life with autism can be. www.rapha.cc











Hardware



Hunt 4Season Dura wheelset £229

UK-based Hunt Bike Wheels has an ever-expanding range of wheels designed for British road conditions. Needless to say that means tough, and at a claimed 1,696 grams, they're also relatively light for the asking price. The alloy rim follows the wider-is-better trend at 23mm.

www.huntbikewheels.com

Vittoria Corsa Speed tyres €77.95

To be released in January, the Corsa Speed incorporates graphene into its tread compound, allowing Vittoria to produce the lightest ever tubelessready tyre. Thanks to the graphene, it's also self-healing, sealing the hole if it's punctured. Vittoria also claims the lowest ever straight-line rolling resistance, coupled with good cornering grip. A tyre for all seasons.

www.vittoria.com





Brooks Cambium C13 saddle

Another product to be launched in January, Brooks has eschewed both leather and steel in favour of a plastic base, carbon-fibre rails and a rubber-impregnated cotton cover with a narrow profile, for a more performance-oriented and lighter saddle, at 265 grams.

www.brooksengland.com





Velopac Belgium musette £26.00

Carry your sandwiches — or the latest issue of Cycling Active — around in this waterproof musette emblazoned with the Lion of Flanders and Belgian flag stripes. There's a water-resistant zip closure and wide adjustable webbing strap. It's one of a variety of designs.

www.velopac.cc



Drift Stealth 2 Action Camera £149.99

Drift claims that its Stealth 2 is half the size and 40 per cent lighter than the competition. It records full HD video and has a claimed battery life of over three hours. It's compatible with remote controls and is WiFi enabled for easy use out on the road. www.driftinnovation.com

www.airshotltd.com



Airshot tubeless tyre inflator £59.99

Tubeless tyre technology is taking off in road cycling, but getting the tyre seated often requires more air, quicker than a pump can manage. Enter the Airshot. You pump air into the bottle reservoir, then open the valve to give your tyre a sealing blast.

Software



Bollé Transformer helmet £89

Three helmets in one, the Transformer has two removable panels that change it from a more enclosed aero helmet into a vented model. There's also a removable peak, should you venture off-road. An optional rear light with continuous and flashing modes and a full-cover winter liner add even more versatility. It also comes with a 3D barcode sticker that can be linked to medical and contact details.

www.bolle-europe.co.uk



POC Multi D bibshorts €180

POC's Multi D bibshorts come with a large, light-reflective panel in the upper rear that during the day looks black and grey. They come with POC's Multi D chamois. In terms of practicality, there's a double pocket in the rear of the mesh bibs and seamless shoulder straps.

www.2pure.co.uk



Shimano RP9 road shoes £175

The new RP9s come with heat-mouldable insoles for a comfortable custom fit. They've got a wrap-around single-piece upper and tongue and micro-perforations for ventilation. The synthetic uppers sit on stiff woven full-carbon soles.

www.madison.co.uk

DHB Blok Meso Roubaix long-sleeve jersey £45

This brightly coloured long-sleeve jersey with a fleecy Roubaix lining is designed to keep you warm when the temperature drops. It has a full-length zip, elastic wrist cuffs, a silicone gripper at the hem and several rear pockets.

www.wiggle.co.uk



Morvélo cycling caps £15

These caps mix polyester and cotton for better wicking and more comfort than an all-cotton cap. The brim is lined with antibacterial tape to avoid pong, and there's elastic at the rear. Made in Italy, they come in a range of stylish designs.

www.morvelo.com



Whitstable T-shirt Company T-shirts £24.99

Paying homage to Paris-Roubaix, this T-shirt has the French for 'The Hell of the North' emblazoned across the chest. It should help remind your friends that you're a committed cvcling fan.

www.whitstabletshirtcompany.co.uk





Lusso Aqua Repel jacket £129.99

A lightweight windproof, waterresistant and breathable softshell jacket in the Gabba mode, Lusso's Aqua Repel comes with plenty of reflectives at the rear, a close-fitting hem and a full zip complete with comfy garage. It's made in Manchester, home of British Cycling. www.lusso.bike



Castelli Tempesta gloves £75

Top of Castelli's glove tree, the Tempesta is designed for racing in the wet and cold. It has a waterproof breathable membrane and a water-repellent shell. There are reflective strips on the back, a very grippy palm and a neoprene cuff. www.saddleback.co.uk



Bianchi Specialissima £7,900

Here's the lowdown on the featherlight bike that tops the iconic Italian brand's new road range

he world's oldest bike company,
Bianchi has something of a reputation
to uphold. For more 130 years it has
been making bikes that are not only a
pleasure to ride, but a pleasure to look at too, and
the brand new flagship model, the Specialissima,
is no different.

In making this frame, Bianchi has shunned the fashion for aerodynamics, instead giving the Specialissima elegantly rounded tube shapes, with flowing lines around all the junction points.

And despite a name that harks back to the machine that Fausto Coppi rode to multiple Tour de France and Giro d'Italia victories in the 1940s and 50s, the Specialissima is no luddite. In fact the frame features the same Countervail technology used in the company's Infinito endurance bike.

This technology was developed for use by NASA, and features a viscoelastic material integrated into the carbon-fibre which claims to reduce vibrations by up to 80 per cent. The upshot of this is greater comfort, improved handling, and reduced muscle fatigue over the course of long rides.

This is a bike built for climbing. The frame weighs just 780g, putting it among the lightest in the world, and putting the lucky owner in pole position to snaffle a few KOMs.

www.cycleurope.com



Frameset

Frame Specialissima Super Light Carbon with Countervail Fork Bianchi Specialissima full carbon with Countervail

Finishing kit

Handlebars FSA K-Force Compact Stem FSA K-Force Light Saddle San Marco Aspide Carbon FX Open



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Pro Stealth Evo carbon one-piece handlebar & stem £369.99

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leasing to the eye, light, stiff and offering great steering precision, this handlebar and stem combo from Pro shows you can be fast without compromising on comfort.

The pro peloton is awash with riders using bars and stems from Shimano's subsidiary company Pro. The sleek carbon one-piece Stealth Evo is Pro's top-of-the-range bar set-up, and will make even the most aerodynamic bike look that little bit faster.

Pro has used a monocoque uni-directional carbon construction to obtain the optimal balance between strength and rigidity while at the same time keeping the weight as low as possible – an impressive 350g.

Aerodynamics and comfort rarely go hand in hand;

however, the ergonomic and compact shape of the Stealth Evo absorbs road vibrations and enhances its wind-cheating capabilities. The flat-bladed top of the bars not only cuts through the air but also provides multiple comfortable hand positions.

Aesthetics aren't the be-all and end-all, but they definitely help. The Stealth Evo looks the part thanks to the internal cable routing along with the high-gloss finish and the subtle Pro decals, which are well protected beneath the transparent lacquer.

Available in three different widths and with stem options ranging from 100-130mm, there are no excuses; and there's a set-up to suit every rider.

www.madison.co.uk





Must-have new component, or capitalist conspiracy?



Simon Warren is a former club racer, time triallist and author of the popular 100 Greatest Cycling Climbs series of books. This month he gets angry with people trying to sell him stuff

aaarrgh! I haven't got a gravel bike, what will I do! A what, you ask. You know, a gravel bike: a specific bike for that single ride of the year that isn't rough enough to warrant your cyclo-cross bike, but too rough for your road bike (even with 25mm tyres fitted)... that one ride where you've managed to include a 500m stretch of track through the woods that isn't too muddy or rutted, with just nice neat stones. Still lost? Yep, as am I — does anyone need a gravel bike?

All it is is another product on the ever-growing list of things that no cyclist will ever need: a list that includes the aero helmet, the aero frame, electric gears, a one-piece stem-and-bars combo and, wait for it, disc brakes on a road bike.

Naturally I have an obligation and wish to support the cycle industry by spending as much of my monthly income as I can get away with on shiny new stuff, but sometimes you just have to draw a line. You have to stop and ask yourself, will this make me faster? — or slower, for that matter? What difference will a saving of four watts an hour really make to me, and how many thousands of pounds am I being persuaded to invest in those four watts an hour?

That is the key part, the convincing. No one ever struggled with manual gears, but now they are too slow. No one ever failed to stop with traditional brakes, but now they don't work. Yes, those svelte dual-pivot calipers are simply not effective anymore; you will need to ditch them and swap to discs.

But wait a minute. It's not as simple as swapping your chainset to whatever is in vogue this week; a 52/38, is it? No, apart from the obvious braking system and levers, you'll need new wheels, both for training and racing and, yes, a new frame too, so get your credit card out and get to the shops, don't worry about debt.

Maybe you can recoup some cash by selling the old bike, but then maybe not, as it's fitted with caliper brakes and is therefore a death trap and only good for the tip. And those deep-section carbon clinchers you bought to save you eight seconds

during your attempt at a PB round Richmond Park, they are now useless; did you pay much for them? While you're at the shop, make sure you also invest in an aero frame — you know, one of those frames that looks like it was designed by a 10-year-old boy, just without the machine guns.

It might be just me but bike manufacturers seem to be in competition with each other to see who can turn out the greatest monstrosity. At what point in time was aesthetics completely abandoned and replaced with the function-before-form attitude we have now?

Luddite? Me?

I don't live in the past, and I'm not anti-progress. If I were, I would be shuffling around on a 'Draisienne' refusing to purchase a bike with a chain. I own a carbon bike, and it does have 11-speed gears, but how long before I'm being press-ganged to upgrade to 12-speed? I held off for four years before I switched from 10, and as anyone else who has tried to live in the past will tell you, getting good-quality spares gets harder each year.

I'm well aware that the global-capitalist model relies on a constant and steady increase in production and consumption, else the world will end, and the

phrase 'mend and make do' is now sacrilege. Is the reason behind you fitting 25mm tyres not for comfort, nor aerodynamics, just simple marketing? Come on, they look stupid, they are heavy, they hardly fit under your brake bridge but a few well written

articles by industry experts had you disposing of your fresh 23mm rubber faster than a Chris Froome attack.

Having grown up racing 18mm Wolber tubs, I am already repulsed by the 23mm clinchers I have to run now. But 25mm? I may as well fit panniers and take up touring. It

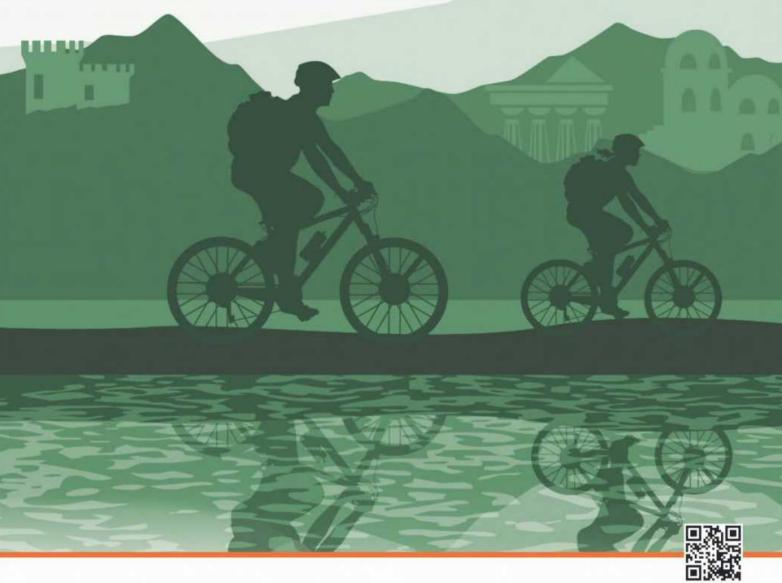
was much simpler in the good old days: you picked a frame, picked a groupset, had a bloke in the club build you some wheels and let your legs do the rest. Speed comes from your heart, lungs and legs, not from your wallet.

'Last year's model? Good only for the bin, mate'



NEXT MONTH 42-year-old Simon tries to come to terms with the fact that he will never turn pro and ride the Tour de France









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"I know where I stand in the pecking order. but should I care?"



Maybe I do deserve a medal, says sportiviste Brett Lewis, in the face of derision by old-school riders who think that ironware should be saved for competitive honours only

'm fed up with people trying to stereotype cyclists. The other day I was at an event where a somewhat smug presenter used a term that I've come to loathe above all others since I took up cycling: 'MAMIL'. I resent the cheapness of this cliché and how it puts me in the same box as every other rider who wears modern cycling kit. There is also an underlying sneer of mockery, within which there is the suggestion we are all making fools of ourselves. Our presenter paused for a reaction to his satirical masterpiece, but pleasingly there was none — just an awkward silence. It seems that I wasn't the only cyclist in the room that felt this particular stereotype was now passé.

Unfortunately, cyclists like to stereotype other cyclists too. I've fallen into a category that I didn't know existed until I was in it. According to an old-school club-racing bloke I know, I'm "one of those riders that sticks his number on his bike, not his back". He went on to say that I "probably like to ride a few miles and expect to get a medal for it".

While in a sense he'd summed me up, it did feel like a big put-down: his matter-of-fact, dour northern accent added a little grit to the effect. At that moment I knew where I stood in the cyclists' pecking order, but should I care?

My inaugural medal came after I rode a 160k event - my longest ride to date. It was the middle of the summer and yet the rain and 30-mile-an-hour gusts of wind were truly Biblical. It felt like I was riding in a cold shower.

The undulating countryside I was riding through contained a surprising number of dairy farms and while it's always lovely to see cows on the hills above you, the mixture of high-ground pasture fields and the torrents of water created a gut-wrenching mix I'm never likely to forget. For running off the fields into the road and mixed in with mud, was a large amount of what comes naturally out of cows, and I don't mean milk. It was hard to avoid any of this as large amounts of the brown stuff were being thrown up from my front wheel and off the back wheels of the riders in front of me.

Adding to this misery was the black dye that

ran from my leather mitts. My hands looked like I'd dipped them in black ink. At some stage I'd tried to rub the cow stuff off my face only to replace it with black dye - which was certainly the lesser of

Eventually, I crossed the sportive finish line, every part of me ached more than usual and nothing was dry. My face would have been bright red but that was hidden under the black dye stain and a liberal splattering of cow poo. At the finish line some poor bloke tried to put a medal and ribbon over my head while I tried to rub the then crusty, dried poo off my face while adding even more black dye. I looked like a clown having a bad day. I felt like one too.

Hell, I deserved that medal! I may not have won a Tour stage or climbed Mont Ventoux, but to me it was the biggest metaphorical mountain I'd negotiated on my bike. I drove home in my wet bibs and base layer, but I wore the finisher's medal all the way home. I even photographed it hanging off a large glass of wine later that night, after a hot bath had cleansed the nightmare mixture of dye, cow poo and sweat from my brow.

My collection of medals has grown and this year's haul is already twice last year's. I've now come to expect a decent piece of ironware at the end of every long ride. I've also become decidedly finicky about what a good medal should look like — the bigger and bolder the better.

So if anybody derides me again for riding a few hundred miles and then expecting a medal for it I'm going to say, "Cow poo!" Feel free to do the same.

A pat on back for a pat in the face: fair deal...





ifted, rock hard and ruthless, Jacques Anquetil was the first man to win the Tour de France five times. He was also very complicated. Here he's shown on the 21st stage of the 1964 Giro d'Italia between Turin and Biella, alongside Italo Zilioli (centre) and Vittorio Adorni (left).

Nobody really knew Anquetil, least of all the public. Portrayed by the press as über-cool, sophisticated and urbane, he was nervous, superstitious and hated meeting people.

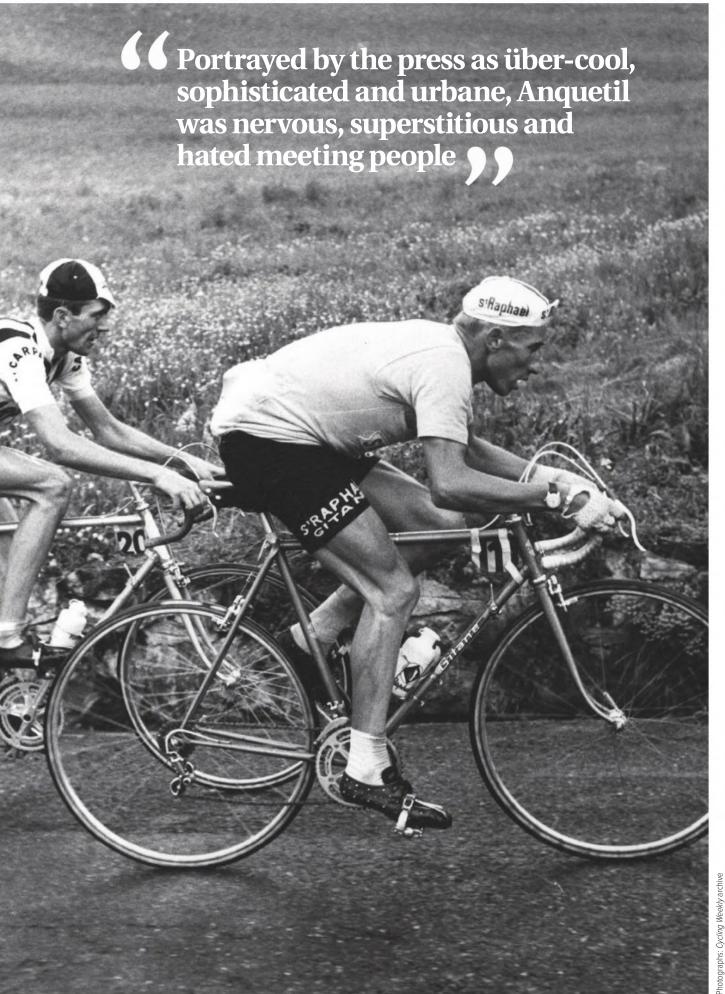
He was said to have loved the high life, and had film star friends when he raced, but retired to a chateau where he valued peace and quiet and watched wildlife in the woods for hours on end.

His team manager in his best years, Raphael Geminiani understood Anquetil the racer. And Anquetil the racer relied totally on his wife Janine, from whom he was inseparable.

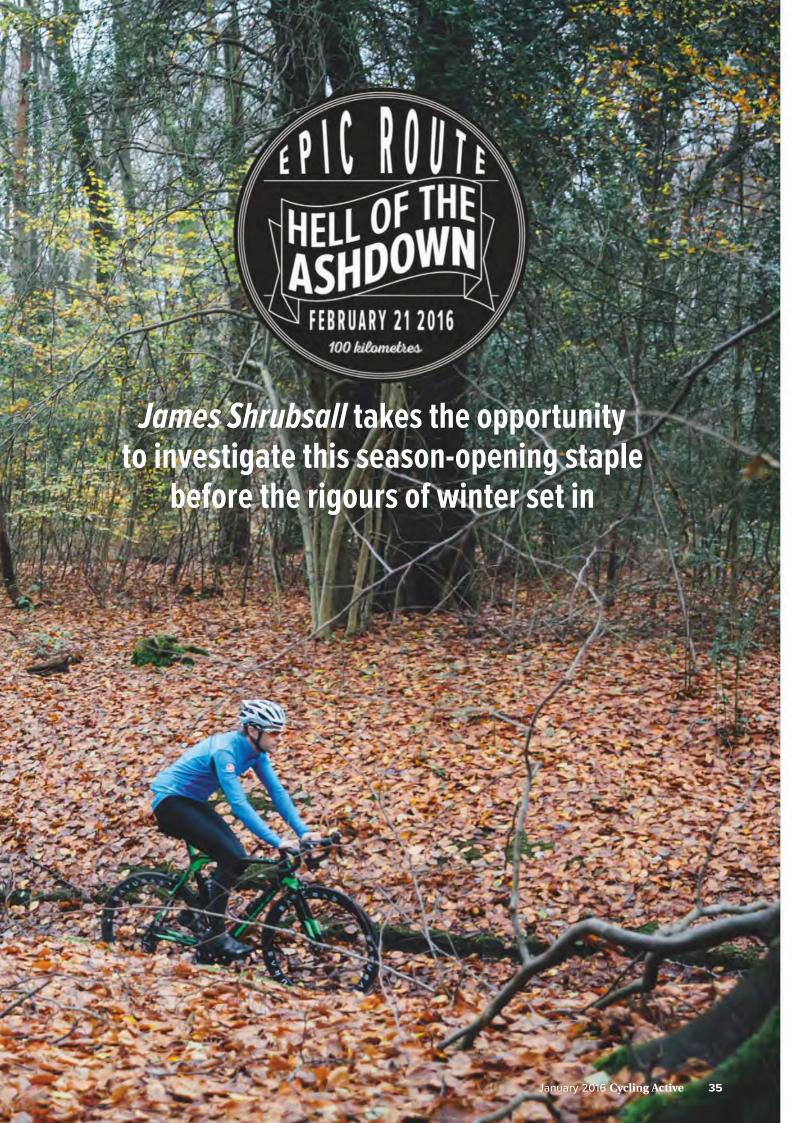
Off the bike there is hardly a picture of Jacques Anquetil where you cannot see Janine. He would not go anywhere or do anything without her, but soon after he stopped racing the couple split, and Anquetil lived with his stepson's wife until he died of cancer in 1987. "I have changed my life, so I changed my wife," he told friends shortly after their separation.

What wasn't widely known was that Anguetil had a child with his stepdaughter, Sophie. Janine had been married before, but she couldn't have children with Jacques, and he wanted children. He told her he was prepared to go elsewhere to have a child with another woman, so Janine's devotion to Jacques led her to suggest her daughter as a solution. For a while they lived as a 'ménage à trois', but then Sophie left, and Anquetil started a relationship with his step daughter-inlaw in order to make her jealous. That was too much for Janine and she left too. She lives with Sophie in Corsica now, but still professes her love for Jacques.











arden of England is such a cosy sobriquet. The county of Kent, tucked away in England's bottom corner and functioning for many of us simply as a cut-through to northern France, earned the name thanks to its profusion of fruit and hop farms.

But for me, it's a nickname loaded with charming imagery: lush green rolling fields, trimmed borders and manicured lawns full of colourful blooms all spring to mind. Perhaps this is just me; it certainly isn't Kent. Not on this November day. A portentous slate sky paints the heavens, while the landscape is a muddle of dark browns, greys and dirty greens.

Kent is no neat garden; it's hardworking, hard-riding country. From the plethora of inland ridges to the windswept flatlands nearer the coast, it's practically a mirror image of Belgium; a place where there may be long rides, there may be easy rides, but there are no long, easy rides.

As we climb towards the bottom of Star Hill past gritty farmyards and a thundering M25, a mere mile under the tyres, only the burnt orange of autumn visible in the trees stirs the senses. The vivid hues are trying



than its fair share of pretty scenes, from its unique and enchanting oasthouses, to hidden lanes and big panoramic views. And HotA's route planners clearly know where to look.

We've just started our ride, remember, and we're on the slopes of Star Hill. The gradient is unforgiving and only getting steeper, but even today the expansive view southward to the Weald is inspiring, for that is where the

Between the rasping breaths echoing in my head, I'm starting to realise already that this is going to be a tough day out.

At the top, Brett and Dan are waiting. I roll up nonchalantly, wearing my best poker mask, but the damage is done. If there was any doubt before we set out, we all now know that I'm the weak link here, and by some way.

Baines

Whether it's crits, cross or sportives, CA's art chief can turn his hand to all things two-wheeled.



"Toys Hill? Apt. I'm about to throw a load from the pram here"

It's only 100 kilometres, I reassure myself. Ah, the bliss of ignorance!

Not far up the road we pass the old HQ at Knockholt village. Perched on top of the Downs it often suffered with slippery, frosty roads, a location that also ensured a serious climb right at the very end. The new start down in Sundridge certainly seems less cruel — I'm not sure the devil would approve.

We very quickly descend steeply off the Downs, where we get mixed up in a trail of liquid cow dung left by a muck-spreading tractor. I very nearly end up on my backside when an incautious dab of the brakes reveals that not only is it smelly, it's very slippery too.

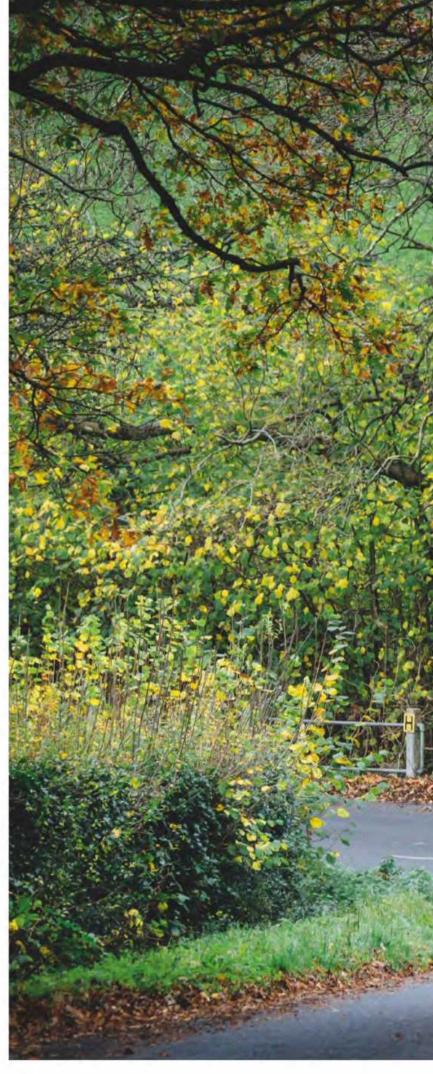
We have now completed the short, northern loop, and with eight miles under our wheels it feels like we can begin in earnest as we cross the busy A25 heading south, ready to tackle Toys Hill.

"Don't worry, it's only three miles long," Brett reassures me with a wink. It doesn't make me feel better. This is his territory, and he knows the roads like the back of his hand. He's also put in the hard graft and the miles and is, hence, very fit.

It appears Dan's going pretty well too, I muse, as the pair of them once more put daylight — oodles of it — between my bike and theirs.

Why this hill is called Toys I don't know, but at this point it's certainly appropriate, because there are a whole bunch of them threatening to leave my own personal cycling pram. My









frustration is at my own lack of fitness, but overriding that by some margin is the worry that I'm going to struggle to complete the ride. However, climbing into a cosy car is simply not an option. For want of a prettier colloquialism, it's shit or bust today.

The steep, snaking descent of Toys rests the legs and puts a smile on all three faces, as we drop down through the trees. A word of caution though: if you do this ride, beware of the first left-hand corner on this downhill. It's a steep bit of road and very easy to go in too fast, with predictably unhappy consequences.

For the next 15 miles, the route rolls and tumbles up and down small undulations, and we're treated to our first taste of this ride's many false flats. Often flanked by trees with few other reference points, these stretches of road appear, to the eye, practically level. Yet the speedo is reading 11mph and the legs exhibiting a rather irksome level of discomfort. On this ride such symptoms generally seem to be accompanied by a troubling amount of distance between myself and my riding buddies. Only upon looking back down the road does it suddenly become apparent that we're riding up a not insignificant hill. Sometimes it's preferable to know your enemy...

Steeped in history

By now it's becoming abundantly clear that the Hell of the Ashdown is a ride of polar opposites — namely 'up' and 'down'. There is really very little flat. We encounter one of the rare exceptions just after Cowden as we approach the southern part of the ride. Furnace Lane is a tiny ribbon of tarmac that meanders alongside a stream, past old mills and farms and on this day flanked by trees laden with the most amazing autumnal foliage. It's a highlight of the ride for me — and not just because it's flat.

Into Forest Row, we're getting to the business

THE BIKE

With a sleek, sub-kilo carbon endurance frame and Shimano Ultegra 6800 drivetrain, the Valence is an ideal mount on which to tackle a long day in the hills. On our grimy outing I felt rather sorry for this bike's pristine componentry, and I'd take a punt and say that February will be pretty similar, so you may want to dig your winter bike out for this one.



"It's abundantly clear that the HotA is a ride of polar opposites — 'up' and 'down'"

end of the Hell of the Ashdown. We've reached the High Weald ridge now and Ashdown Forest itself. This is the hometown, and these are the home training roads, of Eighties and Nineties Tour de France star Sean Yates. Famously hard as nails, Yates spent tens of thousands of miles cutting his teeth around here before heading to the Continent to win a Tour de France stage and wear the yellow jersey too. A light rain begins to fall as we make our first ascent onto the Ashdown Forest's windswept scrubland. Yates would no doubt approve.

The trees slowly thin and the sky gets bigger as we climb Priory Road onto the Ashdown's High Weald ridge. Down the other side our speed picks up as we descend towards Sharpthorne and suddenly Brett is out of sight. As the road levels out Dan and I press on a little, trying to catch him, wondering how he has distanced us so quickly. A mile or so later, the answer becomes clear, as Brett's hunched over figure appears, some way behind in the distance, waving for us to stop. It's that age-old cyclo-sportive blooper — we missed a turn-off and he didn't. Thankfully we only add a brace of miles onto the distance, but even they will come back to haunt me later in the ride.

Regrouped once again, we trace the route further into deepest, darkest Kent on tiny lanes flanked by high hedgerows. In the summer, this might be a pleasant place to lose yourself on the bike but today, halfway through a difficult ride with a leaden winter sky above, the road home is the only one I'm looking for. Of course, there's the small matter of Kidd's Hill to be tackled first, as Brett reminds me. "We're getting near the Wall now," he grins, before mock-sniffing the air: "You can almost smell it!"

I'll be glad when we're done with it.

New additions

But before the small matter of the Wall there's the small matter of a pair of fords to negotiate — another new-for-2016 addition to HotA. I'm more nervous about this than the Wall if I'm honest, because I know how slippery fords can be through unfortunate experience. Thankfully we all make it through shiny-side up, with only distinctly damp backsides and ankles to show for it.

Our tiny, gritty and undulating tarmac ribbon leads us through dense woods and hedgerows back round in a loop that crosses the second ford and then snakes slowly up onto the High Weald again. Like condemned men offered a short reprieve, we revel in a couple of miles of flat along the ridge followed by an exhilarating descent, before it's time to take on the Wall.

As we approach, a short ramp of tarmac at maybe 10 per cent rears up ahead. "Is that the top?" I offer in jest, knowing full well it can't be. All the same the sheer







the rain is no longer with us, in its stead a blanket of twilight is slowly descending over the Kent Weald. None of us have lights. Looking at my Garmin, which displays an embarrassingly meagre average speed of 13mph, I feel rather guilty for our slow progress. I blame my legs.

The next few miles are pleasingly free of hills, enabling us to make useful progress towards the bottom of Wickhurst Lane-Bayley's Hill. Which could be good, or bad, depending on how you look at it.

At the village of Sevenoaks Weald Brett leads us

KNOW THIS

Getting there

The start at Sundridge is conveniently located a stone's throw from the M25, junction five. Leave the motorway, head west for half a mile along the A25 and you're there. Sundridge is also just a mile from Sevenoaks, which can be reached on the train from London Charing Cross in 35 minutes.

Staving there

Try the elegant Royal Oak in Sevenoaks, where a double room costs £115. Rosevenoaks.co.uk / 01732 451109. Alternatively, the Kings Arms Hotel in nearby Westerham can offer you a double room plus full English for £70. www.oldenglishinns.co.uk / 01959 562990

Bike shops

The Bike Warehouse on Sevenoaks High Street is located near the start and can be found at the-bike-warehouse.com / 01795 537182 — it's unfortunately closed Sundays, but there is a Halfords too. In Gear Cycle Sport, located halfway round the HotA in Forest Row, is definitely worth knowing about too. ingearcycles.co.uk / 01342 823829.

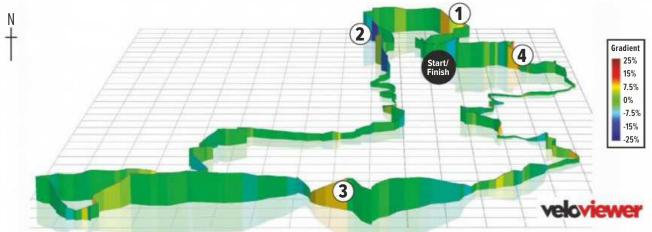
off the main road and onto the ride's new 'rough stuff' section. It's a brave move by the organisers, because Wickhurst Lane ramps up the rough factor from the 'unruly playground' of the average offering to 'Texas maximum security prison yard'. Huge unavoidable puddles and flinty potholes abound, and it's hard to pick a flowing line through the carnage. I can't help but feel a great deal of sympathy for Dan's deep-section carbon rims; if you're taking on this ride, leave your best wheels at home.

The sighs of relief as the tiny lane morphs from mud to tarmac becomes a rasp of near-asphyxia, certainly in my case, as Wickhurst Lane flashes us its chevrons. We're on the final climb now and in true sportive tradition the organisers have left us a treat to finish with. Between fields, farms and country piles the road winds relentlessly upwards with very little respite on offer. A kilometre or so of hard climbing delivers us to a junction with Bayley's Hill, where we turn right and complete the ascent, steep all the way. I allow myself a little inward celebration at the top. We've conquered every categorised climb and there are but five little miles to go.

By this time most cars are showing at least their sidelights, so we press on quickly towards home. The route shoves a handful of last ditch quadbusting rises into our path before we reach Ide Hill village and, at last, drop off the ridge through the trees in the half-darkness, back into Sundridge and our waiting cars.

THE ROUTE & KEY CLIMBS

The Hell of the Ashdown might fall well shy of the average summer sportive's 'epic' distance, but remember, it's a February event. The air's thicker and the legs are only just getting geared up for the season, and with seven big climbs, if you're looking for some easy miles you'd better look elsewhere. www.hell.gb.com



For a Veloviewer link go to veloviewer.com/route/6156297580

CLIMBS

At the risk of disappointing anyone hoping for a gentle introduction, Star Hill begins within two miles of leaving HQ and is a kilometre-long eight per cent haul onto the top of the Downs. It'd be easy to burn a match or three here, so take it steady, admire the view and think of it as a particularly thorough warm-up.

Toys Hill
The second in a vicious early one-two following Star Hill, you can only be grateful that this two-mile, five per cent grind up through the trees is the easier side of 'Toys'. It's never especially steep, and there's an exhilarating descent to follow, but it will make you press hard all the way up.

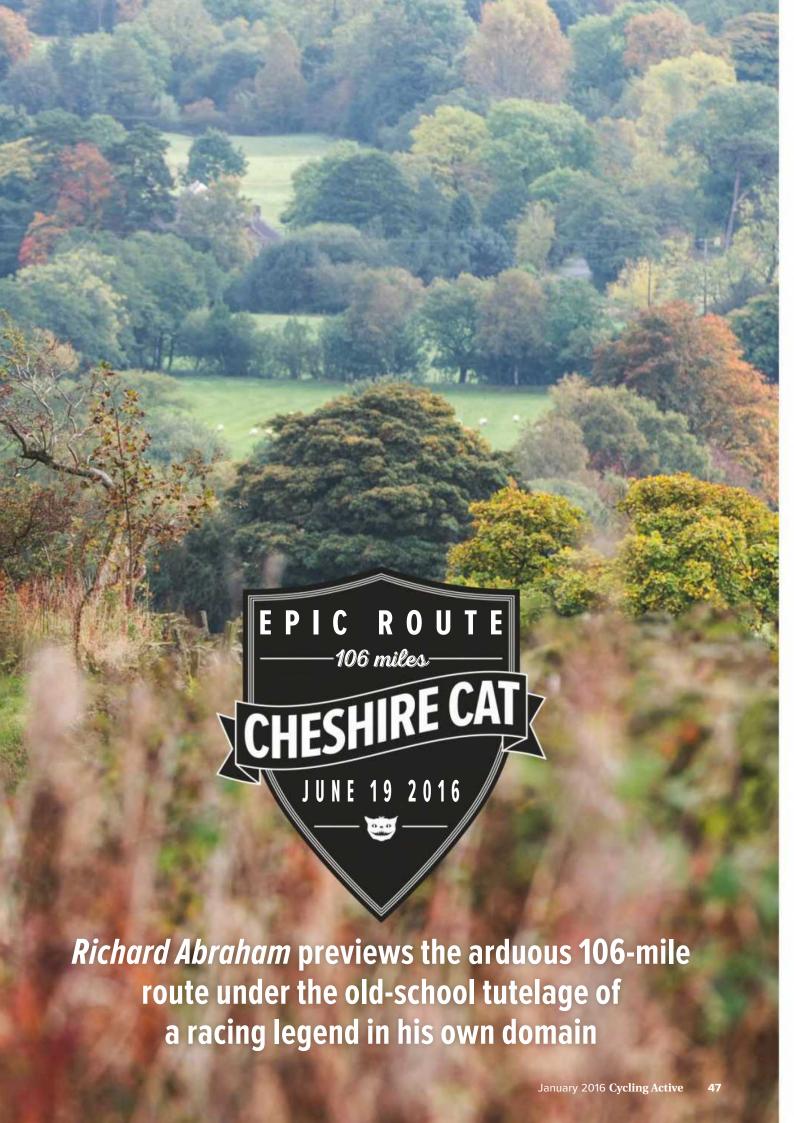
3 Kidd's Hill (The Wall) Even if you've never ridden the Wall before, you'll probably feel you know it intimately thanks to your ride mates telling you all about how difficult it is, not to mention the section on HotA's website describing how Tour de France organisers refused to send riders up it in 1994 because it was "too hard". Admittedly, it's not easy, but ridden sensibly it needn't be any harder than the other big hills here.

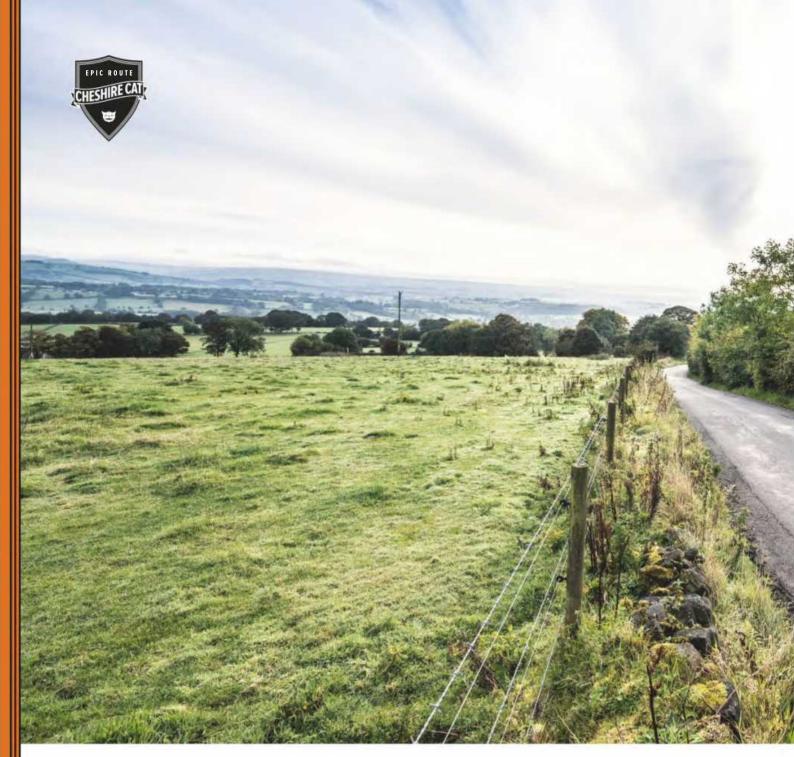
Wickhurst Road/Bayley's Hill
A double measure of
full-strength Kent Weald finest,
complete with a rough stuff
section to take the clout out of
your legs before you even reach
the bottom. Winding steeply up
past fields and the odd
enormous house, Wickhurst
Road eventually meets Bayley's
Hill where you turn (carefully!)
right and complete this
gruesome twosome. It's not
the last climb, but it is the last
big one.











e modern riders have it easy. My bike for today has electronic gears — no fewer than 22 of them to choose from — and the

latest aerodynamic frame, designed on a computer, tested in a wind tunnel and sculpted in carbon-fibre. The man I'm riding with comes from a different era: a time of heavy steel bikes, down tube shifters, soggy woollen jerseys and steak for breakfast. Clearly, it was a time of different thinking too; for this 106-mile ride, he has brought along just one 750ml bottle.

His name is Les West. He was the winner of three national titles and finished in the top

four at the World Championships at amateur and professional level; he famously won the 1965 Tour of Britain (then called the Milk Race) at his first attempt, aged 21, before winning it again two years later.

We're here to ride the route of the Cheshire Cat, one of the most renowned early-season sportives in the UK. West isn't a Cheshire Cat—he's a Potteries man, having grown up down the road in Stoke-on-Trent. Besides a small stint racing on the Continent, he has lived his whole life nearby. This is his terrain. He still remembers his first ride, aged

"Leafy suburbia is swapped for the soft-focus rural surroundings of Cheshire"



15, out to Danebridge on the Staffordshire edge of the Peak District. He's what the French would call *du terroir*, not just a local but someone intimately connected with the land of his birth.

Quite just how connected becomes clear not long after we roll out of the headquarters at Crewe's Queen Park, swapping the leafy suburbia for the soft-focus rural surroundings of Cheshire in the early autumn morning mist. "I was riding home when a driver came hurtling around this bend far too fast and forced me into the hedge," he remembers as we head south-east towards Stoke-on-Trent. Luckily he pulled himself out of the foliage and found his rear wheel was just about true enough to ride home.

What also becomes clear is that West is still fit as a fiddle. He still knocks out century rides to Wales and back with his mates. He might be 72 (almost three times older than

pro racer of



Richard **Abraham** Disappointing British



amateur racer for a couple of seasons in the 2000s. Abraham has accepted his fate, losing whatever modicum of climbing form he once had and becoming a leisure rider.

me) but he's still got it: the natural fit on the bike, the suppleness in his pedalling, the relaxed shoulders. If I could achieve anything close to his style, and fitness, when I'm into my seventies, I'd be a very happy man. In fact, it feels like West could probably give me the nod right now and we'd instantly drop into some through-and-off. My bike for the day, Fuji's aero Transonic frame with some lively deep-section wheels, certainly feels up for it. But why would you want to when the person you're riding next to is a two-wheeled anecdote-dispenser? Usually when your ride mate starts spewing out tales about Tommy Simpson and Eddy Merckx, you just nod along while drifting off into a daydream until they've finished. The thing about West is that he speaks with authority. He raced with those iconic athletes; he actually knew them.

As we roll along the lanes, the route begins to head due east through the little towns of Shavington and Audley; I'm still waking up. The cool air that heralds the imminent onset of winter is like the cool spring conditions that often prevail when the sportive takes place in mid-March, although any potential spring-like sunshine is having a hard job poking through the moisture today. It's all change for 2016, though: the ride will, for the first time, take place on June 19.

Getting medieval

Thoughts turn to the ride's name: the Cheshire Cat. Did they call it that after the mythical feline of Lewis Carroll's *Alice in* Wonderland who according to legend was supposedly grinning because of all the milk it got around Cheshire's dairy farms? Well, there's plenty of bucolic landscapes with Friesian cows mooching around in the lush, dewy fields, to keep you smiling, tail up, once you escape the gravitational field of Crewe and Stoke-on-Trent and head towards the Peak District

Or is it called the Cheshire Cat because riders find their lips pinned back into a grimace as soon as they tackle some of the climbs on the route? This theory gains strength as the eastern skyline appears closer, and higher, after 19 miles of country lanes as we pass through Alsager. We're approaching Mow Cop.

Silhouetted against the horizon in front of us are the remains of a fort. Let's look down the medieval checklist. Big hill? Tick. Very steep incline? Tick. Fearsome reputation? Tick. Even the name is bellicose. It's pronounced Mow as in Chairman Mao Cop; or Mow as in 'M-ow, my legs hurt.' You don't Mow the lawn. In fact, they also call this the 'killer mile'. Never mind that the castle is actually a folly built in the 18th century, the name is certainly apt for the modern age.

We take a breather halfway up to admire and comprehend the most severe section, a 23 per cent wall of a few



hundred metres alongside the Cheshire View pub. One local resident strolling down the hill stops to see if we're all right, regaling us with a tale about the morning when he awoke to a revving engine and then a loud crash, and dashed out to see a motorcyclist standing with his bike at the side of the hill somewhat bemused; his chain had snapped trying to get up the road. He smiles, wishes us well, and carries on. Evidently this is the sort of place where locals have learned to expect the odd eventful comeuppance.

Mow Cop causes carnage during the Cheshire Cat too. It's not quite in the same league as Hardknott Pass in the Lake District or Rosedale Chimney Bank in the North York Moors, but it's not far off. That one-in-four steepest section defies perspective. At the sight of it, you don't know whether to laugh or cry. Presumably this road was, once upon a time, unpaved; how on earth anything went up and down it back then is beyond me.

It's also a mile long from top to bottom, and there isn't really an easy section. As soon as you cross the high-speed railway tracks, you know you're not going to get a rest until you reach the top. The level of difficulty means that even the

"The last time I got off my bike and walked I was 11; it's not happening again today" sprightliest septuagenarian will need to shift into bottom gear and grind it out. Where many climbs in the UK tend to give you a choice — ride hard or sit up and pace it steadily — here you have to ride flat-out or you fall off. On the day of the sportive, when this section of the route is closed to traffic, many people do exactly that. The last time I got off my bike and walked, I was 11 years old; it's not happening again today.

With all the heaving at the handlebars and scooping up air, there's not really much time for talking. I try to ask West whether he owed his legendary climbing legs to multiple reps up and down here.

"Oh, we never used to come out *here* much," he says. I don't need to ask why.

Wild West

It's worth stopping at Mow Cop top even if you don't need to take a moment after the effort; it's like gazing out to sea from a coastal cliff, only in this instance the endless plains of Cheshire stretch out until they blend into the horizon in the far west.

It's a good time to ask West about where he gets his fitness, not to mention enthusiasm. Not many men his age would be able to make it up a climb this severe, even if they wanted to. Having swapped cycling for running when his daughter got into athletics ("I just ran a few marathons," he modestly says), he rediscovered the bike in his fifties and sixties, getting back into veterans' racing and winning the 2003 Masters national championships as well as the 2006

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League of Veteran Racing Cyclists national championships. He doesn't race anymore but admits he's eyeing up the odd time trial in 2016.

It's not as though West needs to bolster his palmarès. When it comes to reviewing his past glories, he is characteristically self-deprecating, despite his impressive tally of huge achievements. One of those achievements came on the slopes of the next real test of the route, which lines up following an 11 mile-journey east up and down the choppy landscape between Mow Cop and Meerbrook.

These are the sort of roads that have me inwardly thanking my choice of a mid-compact 52-36-tooth chainset and Shimano's dual-pivot Dura-Ace brake calipers. Passing through the chocolate box pastoral scenery around Rudyard, we cross the A523 main road and roll down through the fallen leaves and to the foot of Gun Hill.

Sitting on the edge of the Peak District, Gun Hill is very much the kingdom of the climbers. Here, they call Les West the king. He was crowned on repeated laps of a circuit around this hill in the 1965 Amateur National Championships road race. The secret, West confides, was not attacking on Gun Hill itself. The climb is far too hard for that, with the false flat over the top proving too much for any riders who had blown their doors off with a surge on the steeper, 10 per cent sections on the lower slopes.

"Before we got to Gun Hill, I'd have been away," he says. "Not necessarily on the last lap. Any lap. First lap, sometimes."

"Gun Hill is very much the kingdom of the climbers. Here they call West the king"

Grit-inducing grippiness

The terrain of this part of the Cheshire Cat offered West the perfect opportunity to ambush his opponents in the National Championships. It also made him the rider he was. The climbs on today's route are not excessive — just four principal ascents: Mow Cop, Biddulph Moor, Gun Hill and Wincle — but the rolling roads are relentless.

We in Britain have our own word to describe this sort of riding: a word that even our Continental cousins with their centuries of bike racing heritage can't emulate: grippy. It's one word that does such a good job of summarising the rough road surfaces and humps and bumps of British roads that kill any sense of floating from A to B or gently flowing along on hard-earned momentum. Our roads are constantly gripping on to our tyres and slowing us down.

"Oh, I can understand why you climb so well, Les," one contemporary once told West when the came to train out here. Grippy is what makes the Cheshire Cat such a challenge, and why this landscape builds riders as hard as Les West. It's a good job that the Mow Cop 'killer mile' features where it does on the route; without its sorting-out of the field, the larger





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THE BIKE

In fairness to the Fuji, this really wasn't its terrain. But the Transonic 1.3, the firm's aero offering equipped with Shimano Dura-Ace 11-speed mechanical, wasn't found wanting on the lumpy lanes and tough climbs. The mid-compact chainset was spot-on, as was every single gear shift (and there were many). The dual-pivot brakes on the in-house aluminium/carbon Oval 950F rims were predictable and reliable while the rim depth rolled nicely and felt stable in the winds. Weighing around 7.5kg (depending on set-up and size), the bike didn't feel too cumbersome on the climbs thanks to it being very stiff, even down to the budget in-house finishing kit. A set of 25mm tyres would have been nice to absorb more of the road bumps (this is England, remember), but given that that is an easy upgrade, we're really just splitting hairs.



numbers would be carnage out here on these narrow roads.

In fact, it's a stroke of genius on the organiser's part that the toughest climbs have been grouped between 20 and 40 miles along the 106-mile route — far enough away from the start to mean that thousands of riders don't all tackle them at once, and early enough in the ride that they're reached before early-season legs are shot. Even so, the final rolling miles through Cheshire really feel a lot tougher than they ought to.

After what feels like it should be a final push to the finish up the climb through Danebridge and Wincle, there remain 64 miles to cover, heading back into the lanes around Sutton before diverting west towards Northwich and Delamare Forest.

Doing it the hard way

My mind drifts once again to the life of luxury enjoyed by modern riders. That's not to say West doesn't enjoy the latest trick bits of kit; today he's riding a Pinarello F8 equipped with Campagnolo Record, provided by his old racing mate and boss of cycling distributor Yellow Limited, Phil Griffiths. But West's era was very different indeed.

While riders on top domestic teams nowadays live and train like top-level pros — training hard in the morning and putting their feet up and recovering in the afternoon — when West was a top amateur, he was putting in a full day's shift, first as a joiner and then later as an engineer for BT. He remembers riding to and from



work with plastic bags around his shoes ("it was still quicker than the bus") and heading out on his bike again after clocking off.

"I'd come out this way at weekends but after work I'd go on those main roads, Stoke-on-Trent, along the bottom of Mow Cop, Congleton, Macclesfield, back up to Leek, and then back home. That would be about 35 miles, three or four times a week," he says.

"I'd just ride whatever I could," he adds, "I was never too bothered about kit."

His achievements can easily be overlooked after the exploits of Britain's golden generation of

Mark Cavendish, Bradley Wiggins and Chris Froome. West remembers when he finished second in the amateur World Championships road race in 1966, losing out to a self-confessed performanceenhancing drugs addict, Evert Dolman. "I was robbed of the Worlds because of drugs,"

Olympic cyclists and the outstanding careers of

West says. "Dolman, he said, 'what did you take, Les?' I said, 'Nothing.' He said, 'You're joking!' He died at 47 because he was still taking drugs.

"And when I came second, our president [of the national federation] comes up to us and says, 'Well done, what's your name?""

Tales of the good (and bad) old days help to put cycling into a refreshing context. When West speaks of riding up the final climb past Kelsall before the final hour's ride back to Crewe, he explains how he worked at his cycling in the same way he worked at the wood in the joiners' workshop at the end of a long day. It's a nice parallel. That wheelsucker at the back of the group, he's probably a slacker at work as well. The guy pulling on the front yet again, he probably makes an extra round of tea.

The setting for these final few miles is appropriate too. Winding through Wettenhall and Aston juxta Mondrum, this isn't the Cheshire of big 4x4s or gated mini-mansions erected by the north-west nouveau riche and the Man United starting 11. It's the Cheshire of rolling lanes, tranquil surroundings, a hard day's work and the satisfaction at the end of it - as men like West will tell you, there's no better feeling.

KNOW THIS

How to get there

Crewe is easily accessible from the M6 motorway and the HQ at Queens Park is located on the edge of town. Trains to Crewe station (two miles) from Manchester and London and stations in between on the West Coast Mainline.

Where to stav

Rural Cheshire is full of B&Bs and quaint hotels while all your usual chain hotels are to be found in Crewe. www.visitcheshire.com/stay

You'll want a bike comfortable enough for out of the saddle efforts

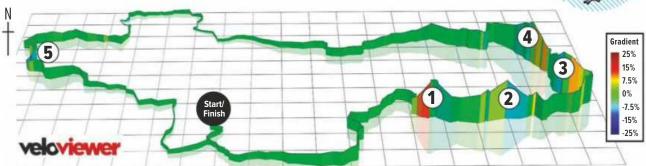
and confidence-inspiring enough to handle the speedy, technical descents. A mid-compact or compact chainset is advisable to cope with the steepest gradients. Some 25mm tyres with decent puncture protection will also be called for, even in June.

The wind and weather can batter the western edge of the Pennines, so come prepared for some cooler conditions during the middle section of the ride, particularly on some of the exposed descents between Gun Hill and Sutton.

THE ROUTE & KEY CLIMBS

One of the biggest and toughest early-season sportives, the Cheshire Cat has a reputation for being the place to blow away the cobwebs. With 1,630m of climbing in 106 miles

over steep climbs and rolling, tough roads, it's not the sort of challenge to be taken lightly. Information and entries at www.kilotogo.com



For a Veloviewer link go to www.veloviewer.com/route/6156292462

CLIMBS

Mow Cop A lung-bursting average gradient of 11.7 per cent only tells half the story. Two sections of over 20 per cent, including the steepest part of 23 per cent for 200m around three-quarters of the way up, are what make this one of the toughest in the country. **Biddulph Moor**

An easy climb compared to Mow Cop, Biddulph Moor is an undulating succession of small ramps leading through narrow, tree-lined lanes for 1.5 miles.

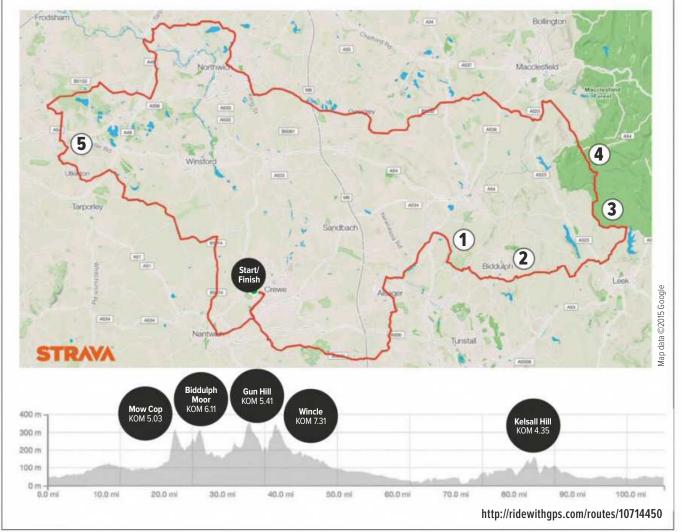
Gun Hill

Starts slowly as it ramps up and up through twists and turns,

lasting 1.4 miles. Averaging 6.7 per cent, several sections nudge just over 10 per cent.

Wincle A trio of sharp kickers through Danebridge and Wincle, lasting 2.5 miles with a five per cent average gradient and sections of 10 per cent.

5 Kelsall Hill Tight turns up from the railway line lead riders uphill before a 1.4-mile-long straight road: Yeld Lane. It's not as long or hard as earlier climbs, but after a short dip to go under the A54, it climbs up again towards Delamere Forest Park.





Sportive bikes

£2,000 to £3,299

To help you choose the most appropriate bike for your next long day out in the saddle we test five of the best mid-range sportive bikes

Words: Chris Hovenden and Oliver Bridgewood Photographs: Daniel Gould



What?

Sportive bikes are also known as endurance bikes, designed for longer days in the saddle where comfort is often the priority over all-out speed. To reduce vibrations from the road, the bikes incorporate different damping technologies and all have a more relaxed geometry — generally the front-end stack is higher and the top tube reach shorter.

The greatest change in recent years for sportive bikes has been the emergence of disc brakes, offering increased modulation and

better braking consistency in both wet and dry conditions. However, as demonstrated by the bikes on test, there is still a demand for classic caliper brakes.

How?

To put the sportive bikes to the test, we rode each over rough country roads, including steep descents and winding climbs, in the harshest weather that nature could throw at us. To test their all-day comfort credentials, we put in long rides of over three hours.

Why?

When out on the bike for any stretch of time beyond three hours, especially when on uneven, bumpy country roads, even the hardiest of souls may begin to wish that they had a more comfortable ride. Built to provide grade-A comfort, sportive bikes may compromise slightly on speed and weight, but thanks to their road-buzz-absorbing characteristics and joint-friendly geometry, you should be able to ride further and longer without pain.





Giant Defy Advanced Pro 2 £2,229 A solid endurance platform equally suited to long sportives and winning the spring Classics



Specialized Roubaix Comp Disc £2,000 The endurance benchmark? The much-loved Roubaix now comes with hydraulic disc brakes



Willier GTR Team Athena Endurance £1,999
This stylish Italian is available in two geometries, with our test bike the more relaxed version



BMC Gran Fondo Disc GF01105 £3,200 The same frame as ridden by the pros. Is the most expensive bike on test worth the extra outlay?



Canyon Endurace CF 9.0 £2,349 A full Dura-Ace groupset for under £2,400 — but is the rest of the bike any good?



Giant Defy Advanced Pro 2 £2,229



A responsive bike with top-end groupset and hydraulic brakes



he classy discequipped Defy Advanced Pro 2 is a slightly heavier and substantially less

expensive version of the Defy Advanced SL, which John Degenkolb rode to victory in this years Paris-Roubaix.

Frame

With a reach that is roughly 2cm shorter and a head tube 2cm higher than the equivalent TCR (Giant's out-and-out race bike), the Defy is definitely designed for all-day riding. The frame is made from Giant's own advanced-grade



composite, which hopes to achieve the right balance between weight and stiffness while still providing a compliant ride. To reduce weight and increase comfort, the seatstays are very thin at the rear. The combination of the full composite fork and long head tube assists handling at the front.

Spec

The Defy has disc brakes rather than a classic caliper set-up — it comes with Shimano RS785 hydraulic disc brakes which are combined with Giant's own SL Disc wheels. The rest of the groupset is Shimano's ever-reliable Ultegra



Specification

Frameset Advanced Grade Composite with full Composite OverDrive 2 Steerer

Gears (includes shifters and mechs, cassette range) Shimano Ultegra 11 speed 11x28t

Chainset Shimano Ultegra 50/34

Brakes Shimano RS785 Wheels Giant SL1 Disc Wheel System Tyres Giant P SL1 front/ rear specific, 700x25mm,

Folding

Bars Giant Contact SL

Stem Giant Contact SL

Saddle Contact SL Neutral

Seatpost Giant D Fuse SL Composite Weight 8.44kg/18.61lb Size tested M/L www.qiant-bicycles.com mechanical. There is also an integrated but removable wireless speed and cadence sensor on the chainstay that can transmit to any ANT+ compatible computer — much neater than zip-ties.

Ride

The wheelbase is a centimetre longer than that found on the TCR, resulting in a much more stable platform. The D-shaped seatpost keeps road vibrations to a minimum. The light and stiff frame provides a responsive, zippy ride, especially for a bike weighing 8.44kg. Its consistent handling and effective Shimano disc brakes gave me confidence on technical descents too.

Value

The Defy features top-end components, Giant's own proprietary parts and innovative technology. There are more comfortable bikes on test, but none as fast as the Defy.





Specialized Roubaix SL4 Comp Disc £2,000



Once the endurance bike benchmark, the Roubaix still rocks



amed after arguably cycling's most gruelling one-day race, Specialized's

Roubaix bikes are designed for all-day riding. The SL4 continues this trend by combining relaxed geometry with disc brakes.

Frame

The first thing you notice about the SL4's carbon frame is its wind-cheating head-on profile with a bladed fork, a curved top tube that slopes down towards the seatpost and the classy matt black finish. There are subtle kinks in both the seatstays and fork where



Specialized's vibration-absorbing Zertz elastomer inserts are housed. The Roubaix's front end is high — a 59cm stack for a 56, affording one of the most relaxed positions on test.

Specification

The SL4 comes equipped with quite a mixture of components — the derailleurs are Shimano Ultegra, the chain and cassette are Shimano 105 and the compact 50/34 chainset is from Praxis. The AXIS 4.0 Disc wheels are combined with hydraulic disc brakes, which use Shimano's IceTech pads, to provide reliable and consistent braking.



Frameset Specialized SL4 FACT 8r carbon **Gears** (includes shifters

Gears (includes shifters and mechs, cassette range) Shimano RS685 shifters and Ultegra derailleurs 11 speed, Shimano 105 cassette

Chainset Praxis 50/34t Brakes Shimano RS785 Wheels AXIS 4.0 Disc SCS Tyres Specialized Turbo Pro

Bars Specialized Comp **Stem** Specialized Comp multi

Saddle Body Geometry Phenom Comp Seatpost Specialized CG R, FACT carbon Size tested 56cm Weight 9.1kg/20.06lb www.specialized.com

Ride

The endurance geometry combined with the Zertz inserts mean that on rough surfaces where you'd often need to lift yourself out of the saddle you can remain seated. The disc brakes work well on steep descents and were reliable throughout testing. When riding seated on the flat the SL4 felt fairly quick but when out of the saddle, sprinting or climbing, it wasn't as responsive or stiff as some of the other bikes on test. This is in part down to the monster wheelbase, at 1,011mm, but does ensure the bike is very sure-footed.

Value

The Roubaix is a top quality machine and if you are looking for a bike on which to spend many hours in the saddle you could do a lot worse. However, the £2,000 endurance market is rather competitive, and there are lighter, better equipped bikes available for a similar outlay.





Wilier GTR Team Athena Endurance £1,999



More Italian than lasagne, the Wilier is a tasty option



n Italian company with a 100-year-plus history of manufacturing

top-end bikes, Wilier is perhaps still not as well known in the UK as some of its compatriots. The latest GTR models are an evolution of Wilier's Gran Turismo range, which sit mid-pack in its comprehensive roster of road bikes.

Frame

The new GTR comes in two models, the SL and Team. The Team model we have here uses lower modulus carbon-fibre than the lighter SL at a cost of 200g.



The frame is also available in two geometries, one more aggressive and the endurance version we have here. They share technical features but the endurance version has a 10mm longer head tube for a more relaxed riding position. Other features include a tapered head tube and slender rear stays for enhanced comfort

Specification

The GTR Team is fitted with a Campagnolo Athena groupset which in terms of quality sits somewhere between Shimano 105 and Ultegra. The wheels are the excellent Campagnolo Zondas,



Specification

Frameset Willier GTR Team frame and full carbon fork Gears Campagnolo Athena 11 speed, 12 29t Chainset Campagnolo Athena 50/34t Brakes Campagnolo Athena Wheels Campagnolo Zonda Tyres Vittoria Zafiro Pro 25mm Bars FSA Omega Compact Alu

Saddle Selle Italia X1 Seatpost FSA SP 148 Black Alu Size tested M

Stem FSA OS168 Black Alu

Size tested M Weight 8.09kg/17.84lb www.atb-sales.co.uk renowned for being sturdy, lightweight training wheels. The finishing kit comes courtesy of FSA.

Ride

Although billed as having endurance geometry, the ride feels lively. Wilier puts great store on its front end geometry and substantial build around the head tube. The GTR handles well and feels lively both on the flat and on climbs.

The Campagnolo Athena groupset is a joy to use. With definite clicks between gears the shifting is positive and accurate. The wheels feel responsive and accelerate well. All in all, it's a nice bike with a sporting ride.

Value

Wilier's GTR is a competent all-rounder, so could well be the only bike you'll ever need. Overall it represents decent if not amazing value. If you're after something a bit different, the all-Italian spec makes this a tasty proposition.





BMC Gran Fondo Disc GF01 £3,200



Excellent-spec wheels and groupset make this is a safe bet

riginally designed for the cobbled Classics, the GF01 is a thoroughbred racing machine designed for vertical compliance and comfort.

Frame

The Gran Fondo GF01 is the same spec frame as used by the pros with respect to the stiffness and lay-up of the carbon-fibre. It features angled seatstays, saddle and fork. These features are all designed to improve comfort and absorb vibration from poor road surfaces. The GF01's geometry represents a compromise, in

performance terms, between 'sportive' and 'race'.

Spec

The bike is equipped with Shimano Ultegra 6800 11-speed and hydraulic disc brakes. The wheels are disc brake-specific DT-Swiss R24 Splines, fitted with 25mm Continental Grandsport tyres. The wheels, finishing kit and groupset are all fine quality components, working perfectly with the frame — there are no low-quality parts keeping costs down here. One minor criticism is that the handlebars, at 44cm, are noticeably wider than those



Specification Frameset BMC GF01 frame and full carbon

Compliance disc fork Gears Shimano Ultegra, 11/32t cassette Chainset Shimano Ultegra 50/34 Brakes Shimano RS785 Wheels DT Swiss R24 Spline Disc Tyres Continental Grand Sport 700x25mm, folding Bars BMC RBD02 Stem BMC RBD02 Saddle Fizik Aliante R7 Seatpost Compliance carbon, 18mm offset Weight 8.50kg/18.73lb Size tested 56cm

www.evanscycles.co.uk

normally specified on size 56cm bikes.

Ride

The carbon fibre lay-up, cantilevered rear dropouts, fork rake and flexible, flattened seatstays all contribute to a smooth ride. Vibration damping was good, but when tackling larger bumps the rear end didn't feel particularly sure-footed. Put down the power, though, and this bike responds well. The wide downtube and beefy bottom bracket lend sprinting confidence. The added weight of the discs is noticeable, though, rendering accelerations slower than on the 1kg-lighter Canyon.

Value

The BMC offers decent value, considering its elite-level frameset, Ultegra groupset and quality carbon wheels. There's also a 105 model with lower-spec wheels for £2,499. OB







Canyon Endurace CF 9.0 SL £2,349



Simply stunning value from the direct sales brand

anyon has shied away from overcomplicating the Endurace frame, the thin rear seatstays counting for much of the bike's compliance. Canyon's biggest weapon for combating road imperfections is the split VCLS seatpost, which is designed to act like a leaf spring.

The Endurace differs from many other sportive bikes with regard to geometry. It has a relatively short headtube, which is in part down to Canyon adopting a higher crown race on the fork and the wheelbase is comparatively short too. Despite the shorter wheelbase there is still room for tyres up to 28mm.



Specification

As a direct sales brand, Canyon can offer incredible value when it comes to specification. For £2,349 you get a complete Shimano Dura-Ace 11-speed mechanical groupset. This doesn't mean the German brand has had to scrimp and save in other areas, with a top quality Fizik saddle, proprietary VCLS seatpost and superb DT-Swiss RR21 DiCut wheels. Even the tyres are top quality, being Continental's superb GP4000S IIs.

Ride

The VCLS split seatpost works well, with the two halves able to move against each other offering



Specification

Frameset Endurace CF frame and Canyon 114 Gears Shimano Dura Ace 11 speed, 11 28 Chainset Shimano Dura Ace 50/34t Brakes Shimano Dura Ace Wheels DT Swiss RR21 Di Cut Tyres Continental GP4000S II 700x25mm Bars Canyon H17 Ergo AL Stem Canyon V13 Saddle Fizik Aliante VS Seatpost Canyon S14 VCLS 2 0 CF Weight 7.14kg/15.74lb Size tested M

www.canyon.com

noticeable comfort over a standard seatpost. Crucially the DiCuts have a wide internal rim width (18mm) allowing the 25mm tyres to sit more like 27s, substantially increasing comfort and creating an all-round package that is as comfortable as other bikes in the test that feature more compliance-related features built into their frames.

Dura-Ace offers stunning shifting, but it also helps to keep the bike weight down. By far the lightest bike here, the Endurace is amazing to ride, with incredibly nippy acceleration. A shortish head tube and wheelbase contribute to precise cornering, too.

Value

Canyon can't be beaten on value here. The spec is superb and results in an astonishingly light bike that is comparable in performance to machines that cost twice the price.







Verdict

Canyon keeps it beautifully simple



If the bikes tested exhibit comfort characteristics that provide a ride that's

smoother than that generally found on super-stiff climbing or aero bikes. We found the Specialized and BMC coped particularly well with rough surfaces, absorbing vibrations well, but larger bumps were still noticeable. However the Canyon's clever seatpost did a better job at absorbing impacts from larger bumps.

We did find that larger tyres made the single biggest difference to comfort, so would recommend you look for a bike that will accommodate wider tyres. In addition to this, wheels with a wider internal rim width and tubeless compatibility, such as the DT-Swiss RR21 Dicut on the Canyon, increase tyre volume and

allow you to run at lower pressures without the risk of pinch flats. This significantly increases comfort on long rides.

The Wilier performs well in all areas, but doesn't really excel in signification any particular realm. It is a solid all-round package that is ideal if you are inclined towards the romanticism of a good-looking Italian frame and groupset.

Canyon, signification your size and the control of the control of

Specification

The Canyon wins hands-down here. The Giant is second, as it still offers good value for money, and the proprietary wheels are great quality. But it is up against a complete Dura-Ace groupset and DT-Swiss RR21 wheels, in a very light package.

The key thing to be aware of is Canyon's direct-sales business

model. Should you have a problem, you can't simply drop in to the shop where you bought it; and such is the high demand for Canyon, you will likely have a significant wait if they don't have your size in stock. On the other

hand, you could pop into a local bike shop tomorrow and buy any of the other bikes.

Do you need discs?

The BMC, Specialized and Giant all feature hydraulic disc brakes, while the Wilier and Canyon have traditional calipers. The braking power and increased control offered by discs is significant, affording greater modulation and consistency. While riding the disc brake bikes, I found myself frequently pulling skids, just for fun and because I could.

I was even able to get the rear end of the BMC to step out round a corner, which brought a huge smile to my face. This is what cycling is all about: fun.

However, hydraulic disc systems add substantial weight and I derived much more fun from riding the substantially lighter Canyon Endurace. At a shade over seven kilograms, it is a lot lighter than the more expensive but comparable BMC, which weighs in at 8.5kg. This really is noticeable whenever you accelerate, attack or hit a climb.

If you are more a rouleur built for the Classics, then the additional 1.5kg will be a much smaller percentage of your overall weight and thus less noticeable.

The Dura-Ace calipers are as good as calipers come and still allow you to the lock the wheels



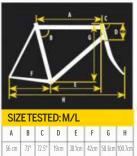
relatively easily. If you regularly ride in areas such as the Lake District, with lots of long descents with 25 per cent gradients, then discs become a sensible option.

I have been so impressed with the Canyon Endurace that I bought one. My rationale was that,



if it is raining, then I won't be taking risks on slippery descents, so I probably don't need discs. On balance, I decided that I would rather have the lighter bike for the climbs, and for winning the occasional town sign sprint against my mates.

Giant Defy Advanced Pro 2 £2,229		Specialized Roubaix SL4 Comp £2,000		Wilier GTR Team Athena Endurance £1,999			BMC Gran GF01 £3,20	Fondo Disc	Canyon Endurace CF 9.0 SL £2,349		
rame Specification Ride	9 9 10	Frame Specification Ride		8 7 7	Frame Specification Ride	9		rame pecification ide	9 111111111111111111111111111111111111	Specification	9
alue	9	Value		7	Value	7	7 Va	alue	8	Value	10
Frameset Advanced Grade Composite frame and fork, with OverDrive 2 Steerer	Frameset	Specialized SL4 FA 8r carbon	CT	Frameset	Wilier GTR Team frame and full carbon fork	F	Frameset	BMC GF01 frame and Compliance disc fork	Frameset	Endurace CF frame and Canyon 114 SL fork	
	. ,	Gears	Shimano RS685 shifters; Ultegra 11sp mechs; 105	Gears	Campagnolo Athena, 12 29t	0	Gears	Shimano Ultegra 11 speed, 11/32t	Gears	Shimano Dura-Ace, 11/28t	
speed; 11x28	Shimano Ultegra 11-		cassette 11x28t		Chainset	Campagnolo Athena 50/34t	Chain	Chainset Shimano Ultegra 50/34	Shimano Ultegra	Chainset	Shimano Dura-Ace
		Chainset	Praxxis, 50/34t								50/34t
Chainset	Shimano Ultegra 50/34	Brakes	Shimano RS785		Brakes	Campagnolo Athena	E	Brakes	Shimano RS785	Brakes	Shimano Dura Ace
Brakes	Shimano RS785	Wheels	AXIS 4.0 Disc SCS		Wheels	Campagnolo Zonda	V	Wheels	DT Swiss R24 Spline	Wheels	DT Swiss RR21 Di Cut
	Giant SL 1 Disc WheelSystem	Tyres	Specialized Turbo	Pro	Tyres	Vittoria Zaffiro Pro 25mm	IL		Disc Continental Grand Sport, Folding	Tyres	Continental GP4000 II 700x25mm
		Bar	Specialized Comp				T	Tyres			
.,	Giant P SL1 front/rear	Stem	Specialized Comp I	Multi	Bar	FSA Omega Compact	-	_		Bar	Canyon H17 Ergo AL
	specific, 700x25mm	-		with	Stem	FSA alloy] [Bar	BMC RBD02	Stem	Canyon V13
Bar	Giant Contact SL	Saddle	Body Geometry Phenom Comp		Saddle	Selle Italia X1	5	Stem	BMC RBD02	Saddle	Fizik Aliante VS
Stem	Giant Contact SL	Seatpost	Specialized CG R, FACT carbon		Seatpost FSA SP 148 alloy Size range XS, S, M, L, XL, XXI	FSA SP 148 alloy	5	Saddle		Seatpost	Canyon S14 VCLS 2.0 CF
Saddle	Contact SL Neutral					XS, S, M, L, XL, XXL	1 5	Seatpost			
				FO FO O1 O1							



Giant D Fuse SL

S, M, ML, L, XL

8.44kg/18.61lb

www.giant-bicycles.com

Composite

Seatpost

Size range

Distributor

Weight



49, 52, 54, 56, 58, 61, 64

www.specialized.com

9.10kg/20.06lb

Size range

Distributor

Weight



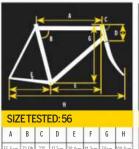
8.09kg/17.84lb

www.atb-sales.co.uk

Size tested

Distributor

Weight



48, 51, 54, 56, 58, 61

18mm offset

8.50Kg/18.73lb

www.evanscycles.

Size range

Distributor

Weight



XS, S, M, L, XL, 2XL, 3XL

7.14kg/15.74lb

www.canyon.com

Size range

Distributor

Weight









Borrows from the MTB parts bin for off-road cred and competence



amed after a US county north of San Francisco where it was founded in 1986,

Marin has an extensive range of mountain bikes, but it also produces a smaller range of dropped bar bikes. The three-bike Gestalt range all use the same alloy frame, with the Gestalt 2 sitting between a SRAM 1x11 equipped model at £1.750 and a Shimano Sora 18-speed at £800.

Frame

The Marin's frame tubes are all ovalised or round, with a tall head tube and internal cable routing



through the down tube. The non-tapered fork has carbon blades and an alloy steerer.

Specification

Marin has made a cunning raid on the MTB parts bin to produce a ghetto single ring set-up. Up front, there's a 42t unbranded four-arm chainset which runs on external bearings. This is coupled to a Sunrace 10-speed cassette with an enormous 11-42 tooth range, giving a top gear of around 100 inches. The lowest gear gives a 1:1 ratio, equal to 27 inches. There's a SRAM X7 rear mech with a clutch to help keep the chain on and to



Specification Frameset Series 3 6061

aluminium, carbon/ alloy fork Gears SRAM X7 10 speed, Sunrace 11 42t cassette Chainset Unbranded 42t **Brakes** TRP Spyre mechanical disc Wheels Maddux FR240 rims, Formula hubs Tyres Schwalbe G One 30mm

Bars Marin 12o flare, alloy Stem Marin alloy Saddle Marin Endurance Concept Seatpost Marin alloy, 27.2mm Weight 10.27kg/22.64lb

Size tested 56cm www.paligap.cc handle the huge gear range. Braking comes courtesy of a TRP Spyre mechanical disc set-up.

The Marin is an absolute blast to ride off-road. That extra-low gear means previously unrideable slopes can be tackled with ease. The Schwalbe 30mm tyres grip well on the gravelly surfaces they're made for, but they skidded to a halt in mud as there's not quite enough tread to maintain traction.

On the road, the tyres roll well and soak up the bumps, with none of the hum that you get from the more aggressively treads. The higher gears are plenty adequate for brisk road riding too.

Value

The Marin's mix of road and MTB parts creates a bike with almost the performance of a full SRAM 1x system, without the cost of hydraulic brakes or the expensive XD cassette body.





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iant has quite a few adventure road bikes in its armoury: the AnyRoad and AnyRoad CoMax have similar geometries,

the former being aluminium, the latter carbon. Otherwise, there's the Revolt range of aluminiumframed bikes and the Invite and Invite CoMax women's ranges.

The eye-catching frame is a compact design which Giant claims leads to a stiffer frame at a lower weight, although it is still not the lightest bike on test. The fork



has carbon composite blades coupled to an aluminium steerer tube and there's lots of clearance all round.

Specification

Whereas the other two bikes on test use a single-ring set-up, the Giant uses Shimano 105 22-speed with a compact 50/34 chainset. This gives more top-end range and with a 32-tooth largest sprocket comes close to the Marin's lowest ratio. As with the Marin, brakes are TRP Spyre mechanicals, although the standard levers are joined by levers on the tops as well.



Specification

Frameset Giant CoMax composite, carbon. Carbon forks with alloy steerer Gears Shimano 105 22 speed, 11 32t **Chainset** Shimano 105.50/34 **Brakes** TRP Spyre mechanical disc. cross top levers Wheels Giant P X2 disc Tyres Giant P SLX2, 32mm Bars Giant Connect XR Ergo Control, alloy Stem Giant Connect, alloy Saddle Giant Connect Forward Seatpost Giant Connect carbon composite, 27.2mm Weight 10.05kg/22.16lb

Size tested M

www.giant-bicycles.com

Value

The Giant scores extra marks for but are a step down from the GT's hydraulics. Although it works well, the 105 groupset is less well adapted for off-road use than SRAM's single-ring set-ups.

The AnyRoad CoMax was happy enough on the gritty bridlepaths of the South Downs. In the muddiest sections, the lack of grip from the almost treadless centre section of the tyres did cause some rearwheel slippage, although the much larger side knobs added some bite. On sandy territory, the tyres fared much better.

The bike also went well on road, where its higher gearing, added to the low rolling resistance from the tyres, meant it felt more like a road bike than a mud-plugger.

its carbon frame and seatpost. The mechanical disc brakes work well,





Great frame and good spec, but limited gear range and clearance



nother brand with its roots firmly in northern California's mountain bike scene.

GT's Grade was one of the first of the new breed of gravel bikes. The Grade range includes both alloy and carbon-fibre-framed models, with the Grade X sitting atop the alloy tree and coming equipped with a SRAM single ring 1x set-up.

Frame

All the Grade frames feature a high head tube and quite a short top tube, coupled to a longer wheelbase and slack frame and fork angles. This gives an upright riding position for off-road agility



and a more stable ride ideal for tackling uneven surfaces.

Specification

The Grade comes with a full SRAM 1x set-up. This ups the ante over the Marin by providing an extra gear and hydraulic disc braking rather than mechanical. There's a 40-tooth chainring, but the cassette only goes up to 28 teeth, resulting in a much higher lowest gear than the Marin.

Ride

The Grade is great fun to ride off road, its long wheelbase lending stable and confident handling. It was able to blast along broken



Specification

Frameset Grade allov hydroformed. All carbon fork with 15mm thru axle Gears SRAM Rival 1x, 11 speed, 11 28t Chainset SRAM S350 140t **Brakes** SRAM Rival hydraulic disc, 160mm rotors Wheels Jalco CR435 rims on Formula hubs Tyres Clement MXP, 33mm Bars GT alloy Stem GT alloy Saddle Fizik Aliante R7 magnesium rails Seatpost Alloy, 27.2mm Weight 9.24kg/20.34lb

Size tested 55cm

www.gtbicycles.com

farm tracks with confidence and when things turned muddy the Clement tyres provided a reassuring amount of grip. The tyres are quite wide and clearance around the fork and the chainstays is limited though, so there were some problems with clogging.

On road, the tyres roll well and a good pace was achievable without spinning out in the relatively low 96in top gear. The 38in bottom gear meant I ran out of scope on muddy gradients fairly quickly though, resulting in a few slopes which I had spun up easily on the Marin having to be walked.

Value

For an extra £49 over the price of the Marin, the GT delivers a full SRAM 1x set-up with an extra cog at the rear and hydraulic braking, which is definitely a step up. On the other hand, the lack of lower ratios makes the Grade less of an all-rounder than the Marin and better suited to less extreme terrain.





Verdict Giant's a killer ride

ere are three bikes, each of which will give you a great vehicle for exploring the on/off

road territory around you. They each have their strengths and weaknesses though, particularly if you intend to ride them in typical UK off-road conditions, i.e. mud.

A bike intended for off-road use needs to be designed a bit differently from a standard road bike. All these bikes have a longer wheelbase and slacker head tube angle than their road bike peers, which results in a confidence-

inspiring ride. I was happy riding each of the test bikes at speed on less challenging tracks, and was able to tackle damp descents and bumpy terrain too.

Margin for mud

Clearance around the wheels is also important, as they can easily clog up with mud. Both the Marin and the Giant score well in this area, but the GT's narrow clearances are a bit of a disappointment and on occasion the crud had to be poked off with a stick to keep the wheels turning.

On the other hand, the GT has tyres that are better adapted to muddy conditions than the Marin or the Giant, so it's a bit of a toss-up which is the best bike on boggy ground. While the GT kept going on flattish muddy sections — until it clogged up — the Giant and the Marin were much more prone to loss of grip and wheelspins. A tyre upgrade would be advisable for a British winter.

Both the GT and the Giant have fully enclosed cable runs: an advantage in keeping mud out, as it can impair shifting performance. The Marin's rear mech cable is part internally routed, but pops out behind the bottom bracket, so it is more prone to contamination. Whereas the Giant's cables are routed completely internally, the GT's run along the bottom of the down tube.







Wide gear spread

Both the Giant and the Marin have ultra-low bottom gears, which allows you to spin up really steep gradients on loose surfaces. A surprisingly large range of slopes were rideable on the GT too; it's just that it's more of an effort and I had to dismount more often than on the other two test bikes. That said, the GT benefits from a lower overall weight than the other bikes on test; impressively, it's a kilogram lighter than the Marin.

At the top end, both the GT and the Marin run out of gears at around 100 gear inches, which means that there's limited scope for pedalling through fast descents. On this measure, the Giant wins out, as its compact double chainset gives a top gear of 120 inches, offering just that bit more flexibility when the tracks give way to smooth-rolling tarmac.

It would be fairly easy to increase the gear spread of the GT: it would

take a SRAM 11-36t cassette, which would give a far more hill-friendly 30 inches, without needing to resort to an XD cassette body.

Horses for courses

All three adventure road bikes on test provide the ability to get off road and tackle loose and muddy conditions — to a greater or lesser extent. The Grade is the loser in the all-terrain stakes as its narrow gear range makes riding steeper gradients a little more of a struggle, although its tyres are better suited to muddy conditions than the Marin's or the Giant's.

They're all highly versatile bikes, however, and with mudguard eyelets and a reasonably high top gear they'd all make good light tourers or commuter bikes.

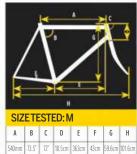
Ultimately, which bike is best is a matter of what you intend to use it for, and small upgrades would make each of them a bit more flexible.

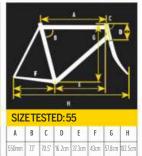
GT Grade X £1,499

Marin Ges £1,000	talt	Giant Any CoMax £1	
rame pecification Ride	7 1 8 1 8 8	Frame Specification Ride	
alue	8	Value	
Distributor	www.paligap.cc	Distributor	www.giant bicyo
Frameset	Marin Series 3 aluminium; carbon fork with alloy steerer	Frameset	Carbon composi carbon composi with alloy steer
Size range	50-60cm	Size range	S-XL
Weight	10.27kg/22.64lb	Weight	10.05kg/22.16lb
Groupset	Unbranded 42T	Groupset	Shimano 105
	chainset, SRAM X7 rear mech, SRAM levers	Gear ratios	11-32t, 50/34
Gear ratios	11-42t, 1x42	Wheels	Giant P-X2 disc
Wheels	Maddux FR240 rims on Formula hubs	Brakes	TRP Spyre mech disc
Brakes	TRP Spyre mechanical disc	Tyres	Giant Connect X Ergo-Control, al
Tyres	Schwalbe G-One 30mm	Bar	Giant Connect, a
Bar	Marin 12o flare, alloy	Stem	Giant Connect composite, 27.2
Stem	Marin alloy	Seatpost	Giant Connect F
Seatpost	Marin alloy, 27.2mm	Saddle	Body Geometry
Saddle	Marin Endurance Concept	Judic	Comp Gel

Frame	8	Frame		9
Specification	7	Specification		7
Ride	7	Ride		8
Value	8	Value		9
Distributor	www.giant bicycles.com	Distributor	www.gt bicycles.com	
Frameset	Carbon composite; carbon composite fork with alloy steer	Frameset	Hydroformed alloy with full carbon fork, 15mm thru axle	1
Size range	S-XL	Size range	48-60cm	
Weight	10.05kg/22.16lb	Weight	9.24kg/20.34lb	
Groupset	Shimano 105	Groupset	SRAM Rival 1x, SRAM	
Gear ratios	11-32t, 50/34		S350 chainset	
Wheels	Giant P-X2 disc	Gear ratios	11-28t, 1x40	
Brakes	TRP Spyre mechanical	Wheels	Jalco CR435 rims on Formula hubs	
Tyres	Giant Connect XR Ergo-Control, alloy	Brakes	SRAM Rival hydraulic disc	
Bar	Giant Connect, alloy	Tyres	Clement MXP, 33mm	
Stem	Giant Connect carbon	Bar	GT alloy	
Jeni	composite, 27.2mm	Stem	GT alloy	
Seatpost	Giant Connect Forward	Seatpost	Alloy, 27.2mm	
Saddle	Body Geometry Toupé Comp Gel	Saddle	Fizik Aliante R7 magnesium rails	







GROUPTEST

Multi-tools

CA's James Bracey reviews 10 of the best multi-tools — an essential piece of kit for rides of any serious distance

What?

Like a Swiss Army knife for cyclists, a good multi-tool should allow you to effectively deal with any mechanical issues you might have while out on a ride. As such, it should include all the relevant Allen and Torx keys along with others such as screwdriver heads and a chain-tool. It should also be of sufficient quality so as to not damage precious parts.

Things can — and at some point will go wrong out on the road and having the means to get going again can prove invaluable. A decent multi-tool that will fit comfortably in a jersey pocket or saddle-pack is an absolute must-have.

How?

The multi-tools were used for a variety of tasks both out on rides and in the workshop, to check functionality, ease of use, comfort, weight and durability.

Topeak Mini Pro 20 £28.99

As its name suggests the Mini Pro 20 includes 20 different functions within its sleek black anodised body. Carried neatly in an easily accessible neoprene sleeve to protect the tool and stop it rattling in your bag, the Mini Pro 20 features a full repertoire including tools

most road riders will never WEIGHT need. The Allen keys come in sizes from 2mm to a massive 10mm adapter that slides onto the 8mm so crank bolts can be GRAMS tightened if needed. There are both flat-head and Phillips

screwdrivers and Torx T25 and T10 bits mostly used for hydraulic brakes. The chain-tool is of a more practical removable design and functions very well; it also has a neat wire chain hook to de-tension the chain, nipple keys and another Allen key to tighten the main body. The tools themselves are made of hardened steel and the sizing is very accurate. In use the short length of most of the tools prevented full, effective use, especially the screwdrivers whose position in the middle of the tool made it difficult to access front derailleur screws. The chain tool worked well and overall it will get you out of most spots of bother.







JetBlack JB 13 £19.99

The JetBlack 13 is a sleek-looking tool with a neat anodised black retaining body complete with machined logos on both sides. With such a slim design the tool fits easily into a saddle-pack without much wrestling and is easy to remove when needed. The 13 obviously refers to the number of tools present and on paper ticks all of the boxes; there are Allen keys in sizes 2-8mm, flat-head and Phillips screwdrivers, Torx T25, two spoke nipple keys

and a small chain-breaking tool. All WEIGHT of the tools are made from chrome vanadium steel and look well made. The folding action of the tool is very smooth so getting the right GRAMS tool out isn't a battle. In function though there are a few things that

let the JetBlack down. Firstly the nice anodised retaining body is very sharpedged so undoing tight bolts without gloves can be painful. Also, when working in confined spaces it could easily scratch precious frames and components. Then there is the chain tool — it just doesn't work well, the arm to hold on to is too small so the chain just gets twisted and consequentially is very difficult to break and join.

www.chickencycles.co.uk

MPart 13 Premium £24.99 110g

The stealth fighter of the multi-tool world, the all-black appearance of the MPart 13 certainly looks good. It has a great tactile feel when in your hand, with rounded edges that do not cause any palm discomfort when applying pressure through the tool. The MPart includes all the obligatory Allen keys up to 8mm, screwdriver heads and Torx T25 head, all fashioned in high quality steel with a classy black finish. There is also a small chain tool which when

unwound completely includes a handy WEIGHT tension key for Shimano Hollowtech 2 crank bolts and also doubles up as a disc brake pad resetter. Unfortunately, the MPart loses points when it comes to

functionality. All of the tools are incredibly small, with the longest part (the Phillips) being just 2cm long. The 8mm barely extended past my knuckles, making it awkward to use. The chain tool is of a similar type to several others in the test, so was not great to use and in particular the chain retaining slots were very small. It's a great looking tool

with a unique feature for Shimano users but is badly let down in practical use.

www.madison.co.uk





Park Tool IB-3 £19.99

Park Tool has approached the multi-tool concept from a different angle, creating the unique IB-3. Rather than having the tools inside a retaining body, the IB-3 has a central body anodised in the familiar Park blue with the tools either side. This makes functionality considerably better than some, as being on the outside makes getting into tighter areas much

less of a hassle. Made of the WEIGHT same materials as their highly respected workshop tools, the IB-3 will last a considerable time and the additional weight GRAMS compared to some gives you that reassurance. The IB-3

includes Allen kevs from 1.5-8mm (on an adapter), Torx T25, a flat-head spanner, a 'proper' chain tool and a slide-off tyre lever that is also the chain-tool handle and includes spoke keys too. The slide-off nature of the tyre lever is probably the main worry with this tool, as it could be very easy to forget to put it back on after use, especially as it is black. The IB-3 is not the most aesthetically pleasing of the tools in this test and the central I-beam construction is not the most comfortable to use but the great practicality and durability make it our test winner.

www.madison.co.uk



Lezyne SV11 £36.99

The Lezyne is a very pretty tool; all shiny silver with a great shaped chain tool I couldn't stop plaving with! Being joint lightest and with a nice black leather effect cover, the SV11 was very comfortable to throw into a jersey pocket, with no sharp edges. Made with a retaining body of thin alloy and tools of corrosion-resistant stainless steel, the SV11 incorporates the features most riders need including 2-8mm Allen keys,

Torx T25 and T30 (used for WEIGHT some chainring bolts) flat-head screwdriver and chain tool. The SV11 suffers the same issues as most of the other tools that try GRAMS to cram a decent number of features into a small package,

as functionality of some of the tools is slightly impaired. The chain tool works better than some of a similar design, predominately due to its ergonomic shape that allows you to grip it more comfortably than some of the others. The only other gripes are that it doesn't fold guite as flat as the MPart so getting the sleeve over can be tricky.

Overall it's a really good tool but the price and a few flaws cost it a perfect score.

www.upgradebikes.co.uk

Pro Mini Tool 15 £24.99

Pro is Shimano's parts and accessories division and it has a wide range of well-made workshop tools and multi-tools. The Mini 15 looks good with a rigid black alloy retaining body and neat blue anodised bolts holding the tool together. The tool folds incredibly flat and I found it easy to slip into a jersey pocket or saddle-pack. The shiny nickel-plated tools are very well made and most are stamped with the sizes to make identification easier — the truncated 8mm is particularly neat. The chain tool is another

'for emergency use only' and was **WEIGHT** very tricky to use properly, but at least it has a bottle opener incorporated for when the frustration gets too much. GRAMS Being such a small and light tool, functionality is slightly

impaired but at least the most utilised tools such as the four and 5mm Allen keys plus Phillips screwdriver are on the outside, so you are not limited to tiny movements for most typical roadside repairs. A neat idea that we liked is the alloy body — it has two bracing struts that the tools can rest on when in use to improve stability. Clever stuff.





www.madison.co.uk

SuperB TB-FD50 £27.90

The TB-FD50 wins the smallest tool on test by a mile, looking more like something James Bond would keep in his wallet than a standard multi-tool. The unique fold-out concept makes for a tool that will fit into the smallest of saddlepacks with ease. The imaginatively named TB-FD50 boasts an amazing 21 functions including 2.5-6mm

Allen keys, Phillips head, WEIGHT Torx T25, chain tool, 5-14mm box spanners and

a bottle opener. In use the fold-out cover becomes a GRAMS bit of a hassle; for example,

to use an Allen key you have to slide the tool out, select the correct size and then fold it all back together before use. If you don't, the outer case just dangles annoyingly in the way of the job in hand. Where it does work well is in the function of the chain tool. Here the outer case becomes the handle and is quite comfortable and efficient in use. The box spanners on the outer case are very ineffective due to their shape and positioning, plus how many modern bikes use traditional nuts anymore? Overall a really neat concept for a multi-tool but let down by its less than practical performance.

www.moorelarge.co.uk



Pedro's RxM £19.99

The Pedro's tool feels great in your hand, with an ergonomic housing made of a tough-looking black composite with the easily identifiable yellow logo. The RxM is a substantial feeling tool reminiscent of a workshop tool and its functionality is similar too. The RxM doesn't have a massive range of gadgets; in fact it is predominately an Allen key set of

good length with everything WFIGHT present from 2.5mm to a usable 8mm adapter fitted solidly on the 6mm. The nice thing about the Allen keys on GRAMS the RxM is that they are positioned sequentially; I've lost

count of the times I fold out a 4mm when it should be a 5mm and then struggle to find the correct one on a poorly laid-out tool — no such problems with the Pedro's. The chain tool is also removable, which aids practicality, and all of the tools are manufactured in corrosion-resistant heat-treated steel. In use the tool functioned faultlessly, but it would be better if it lost the Mavic-specific spoke key and included a Phillips screwdriver.

www.2pure.co.uk

Crank Bros M10 Special Edition £17.99

The M10 is a well-executed lesson in functionality including the 10 most commonly used tools to cover most eventualities out on the road or trail. All of the tools are of a sufficient length to comfortably tackle the job of

loosening or tightening WEIGHT stubborn bolts and are made of 6150 high-tensile steel. The retaining body is made up of two slim yet GRAMS comfortable knurled alloy rods and the whole thing

comes with a Crank Bros lifetime warranty. The M10 comes complete with 2-8mm Allen key sizes including a 2.5mm, plus Phillips and flat-head screwdrivers and a Torx T25 for disc rotors, all of which fitted well, while the slimmer size of the tool allowed good

access in restricted areas. The only issue with choosing the M10 as your only multi-tool for epic rides is the lack of a chain tool. For this you will need to look at the M10's bigger brother, the M17. Apart from this, the M10 is a great little tool usable at home or on the bike.



Never one to pander to modern trends, Brooks's approach to a multi-tool is as you would expect, functional and something that should last you well into retirement. Nestled in between two thick black anodised aluminium retaining plates resplendent with large machined Brooks logos, lie 10 practical tools fashioned from steel that are suited to most roadside repairs.

Included are 2-8mm Allen WEIGHT keys, a Torx T25 plus flat-head and Phillips no.1 screwdrivers. Most of the tools are full length barring the 8mm, so GRAMS the MT10 is equally suited to

workshop use. In use the tool performed very well but there are a few issues; the body has sharp edges due to the machining process so can be a little uncomfortable in the hand, plus it could also easily scratch delicate surfaces. The Phillips head is the smaller style and can damage screw heads if not used carefully. Finally, and quite a small niggle, the leather sleeve is very hard to get on and off so you might want to ditch it in the winter. Overall, and as expected, a classy offering from Brooks.

www.extrauk.co.uk

GROUPTEST

Winter tyres

The one true contact point with the road, a good tyre this winter is paramount to a swift and safe ride. *Hannah Bussey* investigates...

What?

Winter riding can be grim enough without getting a puncture. Having to change a tube in the cold is sheer misery. Swapping over to winter tyres, with their added puncture protection and increased durability, can help prevent roadside numb fingers. Unfortunately, some winter tyres also have greater rolling resistance and offer less road feedback. So this tyre test is aimed at finding the tyre that delivers the best possible balance of durability, resistance, and protection.

Why?

Surefooted rubber-to-road contact is vital. It should be predictable and feel

safe. Getting a puncture out in the middle of nowhere with fading light and freezing cold hands is no laughing matter. Finding a balance between the two elements, grip and protection, is key. Ride enjoyment need not be sacrificed; you don't have to fit tyres that make it feel like you're riding through treacle.

How?

The only way to give winter tyres a ride for their money is to get out in to the Peak District in all weathers and get in some decent miles on them. We've tested all the tyres using a set of Fulcrum Racing S wheels, and pumped them up to around 90psi.

HOW WE SCORE See page 82

Bontrager AW3 Hardcase Lite £34.99

These supple tyres were among the easiest to fit. They measured 26.9mm when inflated to 90psi, so clearance may be an issue for some bikes. The AW3 Hardcase Lite tyres come with a distinctive tread pattern, which Bontrager says makes them superb for wet weather. While I didn't use them in the rain, I did

250 GRAMS

 feel there was sufficient grip on damp sections of road.
 The puncture protection is a belt that sits directly under the tyre tread. This doesn't impinge on road feel,
 despite the additional

carcass thickness. My post-ride inspection confirmed the tyres were intact, with no obvious nicks or cuts.

I'm still unsure whether the Aero Wings, a rubber flange that fills the void between wheel rim and tyre wall, has a real purpose or is a marketing ploy.

Given the robust puncture protection belt, I expected this tyre to feel rather laboured, but in practice the AW3 felt like the fastest on test. Not the cheapest, not the lightest, but for all-round performance, these are hard to beat.

www.bontrager.com





Rubena Mitas Racing Pro Syrinx £24.95

The Racing Pro Syrinx reminded me of a grubby decorator's van: I questioned the quality of their workmanship before putting to them test. Hairy decorators at that — the Rubenas had a positive mohican of rubber 'hairs' left over from the manufacturing process. They measured only 23.5mm despite being marketed as 25mm, although putting them on a wider-rimmed wheel

may increase this slightly. On the WEIGHT road, despite my initial doubts, I actually quite liked them. The rolling resistance is really low for a budget tyre; in fact, it's on a par with higher-(1RAM) end options. The questionable finish belies the fact that the Kevlar-like

reinforcement makes them robust yet light. The skinny profile was noticeable, though, especially after using lots of genuine 25mmplus tyres. This made me worry that my rear wheel would step out or my front would slide on corners — purely psychosomatic, perhaps, as they were grippy enough. These are good budget tyres despite being slightly rough round the edges.

www.rubenacycle.co.uk



Zipp Tangente Course R30 £44

Zipp reentered the tyre market last year after an eight-year hiatus. These 30mm do-it-all tyres are a direct evolution of the new rubber. With only 28 or 30mm options on the cards, Zipp has sent a clear repudiation to the old-school crowd who still believe that only narrow is fast. Most people would agree that, for

WEIGHT

training purposes, a wider tyre trumps a racing 23mm. The R30 version tested, on a Zipp a disc rim, measured 29mm. You'll need sufficient clearance to make the most of these tyres, and they're

designed with disc-brake bikes in mind. The tyre comes with a strip of puncture protection (not present in the Speed version), and so far no punctures. The 120tpi casing is comfortable at 90-100psi - a bonus for anyone looking for a forgiving ride. The highlight is the grip and speed on offer: for a wide tyre, the Zipp doesn't feel sluggish at all. We're really looking forward to a winter of pothole bumping in safety.

www.zipp.com



Schwalbe Durano DD £34.99

Schwalbe consistently delivers reliable tyres, and the Durano DDs are no exception. They positively sing along the tarmac, and Schwalbe claims they are suitable for racing. Their performance is impressive, given they offer far better puncture protection than standard race tyres. The Double Defence (DD) puncture resisting belt is teamed with a layer of a man-made fabric that Schwalbe says offers

superb puncture and sidewall protection. I didn't puncture, and this protection was reassuring.

Measuring 26.2mm, the tyre's girth was also reassuring, giving a planted feeling that was comfortable and confidence-

inspiring. Combined with the low rolling resistance, these features make the Durano DD ideal for faster training rides or indeed winter races. At the end of the test, I regarded this tyre as a lucky find, since it's not widely advertised; even Schwalbe's own marketing does the tyre a disservice by overstating the weight by 80g. They're higher-end, cost-wise, but

performance like this in a winter tyre is a rare find, so they're certainly a keeper.



www.schwalbe.com

Panaracer Gravelking £29.99

The Gravelking stood out for being lightest on test and for how grippy the tread felt straight out the box. The Panaracer specifies 105psi higher than my specified 90psi for this test. I tried both pressures; the higher gave a feeling of being perched on the road, which combined with their box-ish profile made me reluctant to

WEIGHT

bank over on to the tyre's angular shoulders. Run at 90psi, the impact on rolling resistance wasn't significantly noticeable, and they felt more stable. It's worth noting at this point that the Gravelking measured a small 25.5mm when

fitted on the Fulcrum test wheels. Popping them on a set of Easton EA70s with the lower pressure added 1mm, which may seem insignificant but makes a four per cent difference to the width of the tyre, giving more confidence when cornering. They weren't the fastest tyre on test, at either pressure, but Panaracer has pitched them as go-anywhere tyres, a claim backed up by their puncture protection. They are ideal for heading off the beaten track, but not for speedy winter club runs.

www.zyro.co.uk



These relative heavyweight tyres were surprisingly easy to fit. Measuring 25.1mm once inflated to 90psi, they provided a nice dome on the rim, which once transferred to the road felt stable and grippy whether in a straight line or cornering. They feature Continental's newest tyre compound, PureGrip, which sits just below

its well-regarded Black Chili compound, keeping the cost competitive. Having put years of research into compound testing has served Continental well and paid off, making these the most sure-footed tyres on test.

Continental has also managed to find the sweet spot between providing sufficient road feedback and enough compliance. Granted, I was testing on a crisp and dry autumn day, but every twist and turn was railed, giving me confidence to drive the Grandsport Extras pretty hard. The Grandsport are trusted quality and deliver to expectations. At just shy of £35, they're a high-end option, but I will happily pay extra for this level of performance.

Cycling Active January 2016

Panaracer

Vredestein Fortezza Senso Xtreme Weather £49.95

Out of all the tyres, the Fortezza Senso had the most pointed shape once inflated to 90psi. While this may look slightly alarming when compared to the more traditional shallower dome of a pumped-up tyre, it

actually provides the most rubber-WEIGHT to-road contact when cornering, giving me a real feeling of confidence when leaning the bike over. Pitched as Vredestein's wet GRAMS and cold weather tyre, it features the company's Full Protection

anti-puncture system: a thick polyamide layer around the circumference of the tyre, in theory providing protection to the sidewalls as well as the tread. Considering this extra layer, the weight is relatively low, but unfortunately the same can't be said of the rolling resistance. Out on familiar roads, the penalty is noticeable; I had to put in a couple more pedal revs than usual, and momentum was quickly lost. On a positive note, they didn't puncture and felt robust. I didn't really dislike them; they just felt every bit the winter training tyres that they are.

www.saddleback.co.uk



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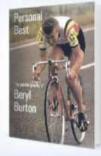
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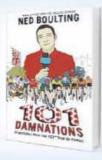
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Rear lights

A necessity for any cyclist, but even more so at this time of year when daylight hours are limited, Chris Catchpole tests four rear lights

Highly visible and practical rear lights to keep you safe during the long winter ahead. Prices range from £24.99 to £36.99 and all offer easy, one-button control, and are charged via a USB port on your computer or plug.

Because it's the law. When it's dark, you are obliged by law to use lights on your bike. Legalities aside, it's just basic common sense that to be safe on the road, you need to be seen, and this doesn't just apply to nighttime riding. Dusk and dawn are particularly

dangerous times of the day when the light is poor and a cyclist doesn't stand out well to other road traffic, so it's well worth using lights then, too.

As soon as British Summer Time ended, we strapped these four lights to our test bikes. We used them in all conditions, and on a variety of ride types. Commuting provided the base of our testing, during early mornings and late evenings, but Sunday club runs in grey and dull conditions provided an excellent chance to see how they performed too.

HOW WE SCORE See page 82





Knog Blinder Mob Kid Grid £34.99

Knog has created the most modernlooking, and dare we say 'stylish' light that we have on test, with 16 LEDs that work together for a maximum output of 44 lumens.

Like the other lights tested, there are a few different power settings available for a constant beam, complemented by an array of flashing modes, all of which differ slightly.

The rubber securing strap **WEIGHT** seems solid, but Knog has listened to past criticisms, toughened up the buckle, and made it replaceable, with GRAMS different sizes for different mounting options. Like all the

lights here, it's operated with one button, and comes with a battery life indicator.

Each charge takes around 4-5 hours but in return you'll get as many as six hours out of the high power beam, and more than two continuous days from the eco flashing mode, so in practice charging time is actually minimal.

All in all the Blinder Mob Kid Grid is the most attractive light we have on test, in more ways than one, and we think more brands should be creating products that combine form and function so well.

Run time: 6 hours full / 55 hours eco Recharge time: 4-5 hours Max output: 44 lumens Weight: 37g www.moorelarge.co.uk

Lezyne Strip Drive Pro £39.99

Lezyne is well known for its beautifully engineered aluminium products, but this chunky rear light eschews the use of metal in favour of light and reliable plastics, which feel solid in the hand. The sturdy rubber strap has enough stretch to fit all kinds of bikes, including a deep aero post — the only light here which can boast that. There are three constant modes of varying power and six flashing modes, including a super-bright power flash option, which will blind any drivers unlucky enough to be driving close behind. It's almost

too much for a lot of conditions, but excellent

 for standing out amongst busy WEIGHT traffic or even for brighter daytime rides where you really need the extra power.

The other flashing modes offer $\widehat{\mathbb{GRAMS}}$ different patterns that dance across the five LEDs — while they're all

variations on the same theme, you can't fail to find a favourite among them. Battery life is good, and importantly there is an emergency eco mode that comes on when the battery starts to die to help get you home.

Recharging is simple: remove the plastic bottom and plug the light straight into your computer or USB plus charger.



Run time: 1.5 hours full / 15 hours eco Recharge time: 2.5 hours Max output: 100 lumens Weight: 62g





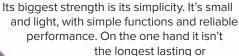
Moon Ring £24.99

The Moon Ring is the cheapest light on test by far, and yet it's also the most versatile. The light is supplied with both a mount for a bike and a bag, making it great for commuters looking for a supplementary light. The most visible setting is

the 25 lumen maximum flash mode, which although a lot less than some WFIGHT others on test, is bright enough. It's simple to use too, with either a flashing mode or a solid beam, each with a choice of three power modes.

The light will last around 12 hours on its lowest setting, but it'll only cover you for an hour and a half on full power with a constant beam. This (TRAM) meant I had to charge it twice a day to see out my whole commute if I wanted all the power on offer. It also doesn't have any kind of emergency

eco mode when the battery gets low, so you'll have to keep an eye on battery life.



brightest on test but on the other it's cheap and recharges quickly.



Run time: 1.5 hours full / 12 hours eco Recharge time: 2 hours Max output: 25 lumens Weight: 27g www.raleigh.co.uk

Cygolite Hotshot Micro £36.99

Cygolite isn't a brand we're too familiar with here at Cycling Active but we were impressed when testing its new Hotshot Micro. The single two-watt LED packs a decent, 30-lumen punch from a fairly small package and, thanks to the design

of the unit, it offers excellent WEIGHT side visibility too.

Compared to the Knog or the Moon, it appears a little dated in its aesthetics, $\widehat{\mathsf{GRAMS}}$ although to be fair that doesn't take anything away from its

practicality or performance. The swivel mount makes it possible to secure the light on a variety of seatposts or rear seatstays while still keeping the light angled effectively. The rubber strap is pretty much par for the course — a simple design that works well. The light scrolls through five modes in total: two solid beams and two simple but effective flashing patterns, as well as a somewhat hypnotic pulsating option.

The Hotshot Micro is one of the more expensive lights on test, but doesn't offer enough to separate it from its rivals. It works well enough and the 18 hours on eco flash mode is certainly impressive — but in this company it feels more than a little outdated.



Run time: 2.5 hours full / 18 hours eco Recharge time: 3 hours Max output: 30 lumens Weight: 35g www.extrauk.co.uk

GROUPTEST

Softshell jackets

As winter begins to bite, *Chris Hovenden* tests four winter softshell jackets designed to keep the cold at bay

What?

Unlike hardshell jackets intended only to repel the wind and rain, softshell jackets are designed to keep out the elements while also keeping you warm when the temperature plummets. A good-quality softshell has windproof panels at the front to protect your torso from the wind; water-resistant properties to keep out all but the most persistent downpours; and a thermal lining to keep your body warm when the air outside is particularly fresh. Importantly, in addition to being thermal, a softshell needs to offer sufficient ventilation to prevent overheating.

Why?

A winter softshell jacket will make riding through the cold winter months far more enjoyable. Softshells are more flexible and comfortable than a hardshell, and as a result they can be worn all day, on top of a base layer. Being water-resistant and breathable, rather than waterproof, they cope well with the classic changeable weather you're likely to face throughout the British winter.

How?

To put these softshell jackets through their paces, we wore them on several rides in various conditions. They have been reviewed on the following criteria: performance, fit, comfort, protection from the wind and rain, breathability, aesthetics and for any standout features that impressed through the test.

HOW WE SCORE See page 82

Ventilation Breathability is really important; look for vents and netted sections Ventilation Breathability is really important; look for yents and netted sections Look for good quality windproof material at the front of the jacket Pockets Ideally, you want enough storage for a whole day's supplies



B'Twin Warm 520 £64.99

This is a substantial softshell packed full of interesting features. It has a simple colour scheme and the fit will appeal to those who favour a more relaxed cut. It is made from a stretchy material. The collar sits higher without being uncomfortable (there is also a detachable neck-warmer), the arms are a good length and the storm cuffs cover the gap between jacket and gloves.

There are three good-sized pockets

578GRAMS

to carry a pump, spare inner tubes and snacks at the rear, a zip pocket on the chest and another zipped, water-repellent pocket for keys or a wallet. A clever feature is the

netted underside of the pockets to improve ventilation.

To help you get seen by other road users, there are reflective strips on the shoulders and decals on the pockets. This jacket is the heaviest on test and it did feel a bit bulky, but that is in part due to it being windproof front and back.

The softshell kept out most of the wind and was fine in light rain.

However, despite the underarm vents and the moisture-transfer section that runs up the back, I found myself overheating more often than not.

Sizes: S-XXL Size tested: M Colours: blue, yellow, red, orange www.decathlon.co.uk

Gore Oxygen Windstopper £189.99

The fit of this jacket is more relaxed than that of the Castelli Mortirollo; it certainly suits the robust cyclist. I did experience some bunching across the torso, but not a huge amount. The gripper and fit around the hem was a little loose for me too.

However, the cuffs are excellent; they overlap with gloves very well, ensuring there are no chilly draughts. The collar is well conceived too — it's comfortable and cut high to keep the cold off.

Gore's Windstopper really sets the standard, and this jacket offers superb insulation and breathability. It is similar to the Castelli in this regard, which is consistent with both garments using Gore fabrics.

Additional zipped vents on the chest are handy if you do overheat.

There are three deep rear pockets, two shallower side pockets and a sixth smaller zipped pocket, though the latter is unfortunately

too small for a phone and is not waterproof. The three main pockets are of a good size, though, and the two side pockets allow for quick access.

There are subtle hi-vis touches all over the place and I particularly like the reflective Windstopper logo on the arms.

Sizes: S-XXL Size tested: M Colours: fluo yellow/black, blue/ black, red/black, orange/black www.goreapparel.co.uk





My favourite thing about this jacket is its tasteful use of hi-vis fabric. The Scotchlite areas look cool and offer superb visibility in all directions, without turning you into a lollypop person — ideal for winter.

Castelli claims that the Mortirolo jacket is designed for temperatures ranging between six and 15°C. When paired with a Castelli mesh base layer, I

WEIGHT 445

found the jacket too warm at around 15°C; it works best between zero and 10°C. It is noticeably thicker than the Gabba, and the added thickness translates into increased insulation.

The Gore Windstopper X-Fast fabric performs superbly, offering excellent breathability. There was noticeably less sweat under the jacket at our mid-ride coffee stop than with some of the others tested. Water-repellency is decent, and when things really heat up, there are vents you can unzip, too.

This jacket is very fitted, with a cut suited to a lean physique. The three rear pockets are well sized and positioned. Overall, this jacket is very well thoughtout and pretty versatile. By adjusting what you wear underneath, you can carry on wearing it throughout winter. It doesn't come cheap but the apparent quality suggests it will last.

Sizes: S-XXXL Size tested: M Colour: black/grey www.saddleback.co.uk

DHB Blok Meso Softshell Windslam Roubaix £65

With its bold colours and 'plus motif' associated with DHB's Blok range, the Meso is the most eye-catching jacket on test. In addition to its pleasing aesthetics, it has many features normally associated with far more expensive softshells.

It has a nice close cut, and the silicone grippers on the hem, with the elasticated cuffs, ensure the jacket stays in place even on long rides. The cuffs are a good size and allow easy access to a wristwatch.

The jacket's soft and fleecy Roubaix lining, with DHB's Windslam technology,

protects your torso from the wind and keeps you warm on fresh early

WEIGHT morning rides. The full-length zip also allows easy temperature regulation.

For storage, there are two large pockets instead of the more traditional three separate smaller pockets and a zip pocket that is a decent size and has a sweat-resistant

barrier to help keep your valuables dry, although

it's not fully waterproof.

The Meso is the lightest jacket on test and it performed well in milder conditions; in truly grim weather, you would want something heavier duty with greater protection from the wind and slightly better ventilation.

Sizes: XS-XXL Size tested: S Colours: black/navy/yellow www.wiggle.co.uk





Should you go tubeless?

Many favour the practicalities of clinchers while others opt for the low weight and high performance of tubulars — but could the latest tubeless tyres offer the best of both worlds?

ntil recently, road bike tyres came in only two options: clincher, with a tyre and separate inner tube; or tubular, like a huge donut that you glue to the wheel rim. Generally speaking, clinchers are the easiest choice for general cycling because if you have a puncture you simply replace the inner tube. It's much harder to fix a compromised tubular tyre, although

they are favoured by racers for their low weight and high speed.

However, for some time mountain biking has had tubeless tyres — a system very similar to a car tyre where an open rubber outer tyre is attached directly to the wheel. No inner tube is used, but the joins are sealed and air is fed directly into the cavity between the wheel rim and the inside of the tyre.

With wheel manufacturers such as

Bontrager and Zipp offering tubelessready wheelsets, this technology is now coming to road bikes. But what are the benefits? We spoke to Josh Ibbett at British firm Hunt Wheels to find out.

"It just made sense to us to make sure all Hunt wheels came with everything you need to fit tubeless tyres," Ibbett said. "There is a definite range of benefits, such as improved puncture resistance, and the ability to



run lower pressures and get better grip."

Instant puncture repair

You can also put sealant inside a tubeless tyre to instantly repair any puncture that may occur, and if the worst comes to the very worst, a tubeless tyre can even be used with an inner tube like a clincher. But because current road tubeless tyres have relatively thick tread, they have gained a reputation for being heavier, too.

"Some of the newest tubeless tyres — such as the Schwalbe Pro 1 — can be the same weight as a standard clincher tyre. So the argument they were heavier than other

options is overcome and you could actually find yourself saving weight compared to a set-up that uses an inner tube," Ibbett said.

"The main problem holding the technology back is that people think fitting and understanding tubeless tyres is some mysterious black art.

"It also seems to me there is a whole tubular versus clincher debate still raging on, and there still appears to be a lot of confusion between tubeless and tubular. The amount of times we hear people say: 'Can you fit this tubular tyre for me?' and we have to explain it's not tubular; tubeless is totally different."

Also, not all the bike trade has jumped on board and at least one big tyre manufacturer — Continental — doesn't even produce a tubeless road tyre yet. Then there's the fact that no international standard exists in terms of tubeless tyre design.

"I think many tyre companies are

reassessing the importance of tubeless road tyres, and as far as international standards are concerned, generally as long as you get

the ETRTO [bead diameter] sizing right, most tubeless tyres should fit most tubeless rims," Ibbett said.

"From our point of view as a wheel manufacturer, the main thing is to produce a good tubeless rim bead because, especially on a road tyre at high pressures, the tyre has to be really held firmly in place with a nice airtight seal."

In fact, lbbett used tubeless tyres himself when he took on the Transcontinental race earlier this year. "I raced across Europe covering 2,600 miles on some really rough roads and even off-road sections as well, using just standard 28mm tubeless tyres, and I didn't have a single puncture. I'd certainly recommend sportive and leisure riders go to tubeless. Those riders are not racing as such, and comfort is probably more on the agenda than pure speed.

"But even for racers there are benefits to be had. If you're racing a crit for example, if it's wet, tubeless will allow you to get better grip as you can run them at lower pressures. Also, there is less resistance involved. With an inner tube, every time you hit a bump there is friction between the casing of the tyre and the inner tube, which will slow you down a fraction," Ibbett said.

"Tubeless can also provide a much more supple ride. In terms of ride quality it is similar to a tubular tyre, you just don't have the hassle of gluing them on and peeling them off. You can put them on straightaway.

"From our experience, once people get tubeless tyres on their bikes, they're really pleased and they can see the benefits. So it might take a bit of time and a bit of awareness but I certainly see them becoming much more mainstream."

"People think fitting tubeless tyres is some mysterious black art"

Industry view

Keith Bontrager



Bike tech legend with Trek Bikes

Cycling Active: What's your view on tubeless tyres?

KB: I'm a fan but then I only train on my road bike, I don't actually race on my road bike, and tubeless tyres are not yet really racing tyres. A tubeless tyre with sealant is much less prone to punctures so it's a much better option than having to change a flat tyre in the rain with buses whizzing by you. And many tubeless-ready wheels can be used either with or without inner tubes, so you don't even have to make a choice straightaway.

CA: Are there any inherent problems with tubeless tyres on road bikes?

KB: I came into road tubeless from many years of mountain bike tubeless experience, so there wasn't really much new that had to be done technologically. The real difference is that the pressure in road bike tyres is much higher than with mountain bikes, so the sealant behaves a little differently.

The biggest problem in terms of uptake is that pro riders don't use tubeless. The lightest possible tubeless tyres would probably roll a little quicker than tubulars, but they would also be fragile. However, we fit tubeless-ready wheels to Trek bikes because we anticipate that for sportive and recreational riders the tubeless set-up with sealant will be a popular thing.

CA: What about the issue of an international standard — is that affecting how tubeless tyres are being received?

KB: Certainly at the moment the international standard is fuzzy, it's not guaranteed. Having a bunch of proprietary standards that aren't compatible would be a nightmare. So there is a legitimate attempt to try to make the interface between the tyre and the rim, both mounting and seated, fairly universal.



QUICK FIX

Front derailleur

A component on your bike that takes a beating whenever you ride, the front derailleur deserves a little TLC too



he front derailleur probably has one of the hardest jobs on your bike; it sits there quietly minding its own business until you force its thin metal (or carbon) plates to push a chain under massive tension from one chainring to another.

The fact that it does this without much fuss and usually without lots of accompanying rattles and noise is nothing short of an engineering wonder, and you can expect a well-adjusted and looked-after front mech to give years of good service.



I often see people shy away from working on their own front derailleur due to the apparent lack of simple adjusters, but these tips and steps should give you a better understanding of how this humble but indispensable device works.

Tools

Tools for the job:

4mm and 5mm Allen keys

Small flat-head or Phillips screwdriver

Bike workstand (you will need to be able to pedal and shift gear)



CHECK ALIGNMENT

If your derailleur is not shifting smoothly, making lots of noise or simply not shifting out of one gear then check the alignment. Shift gear to put the chain onto the small ring (this reduces cable tension, making it easier to make adjustments).

Looking from above, the derailleur cages should run parallel with the chainrings, if this is not the case, loosen the mounting bolt for the derailleur gently and manually move the cages until they line up with the chainrings, then tighten the bolt firmly.



JAMES BRACEY CA MECHANIC

Self-confessed bike geek and senior bike-fit technician at Pedal Heaven in Fleet, James rides for Pivot Boompods RT and has raced across a variety disciplines for nearly 25 years.

Jargon

Mech: derailleur gear mechanisms are often referred to as 'mechs'

Barrel adjuster: a device to allow the fine-tuning of gear (or brake) cables by effectively extending the outer cable.

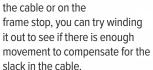




CHECK VERTICAL ALIGNMENT Shift into the big ring — check vertical alignment by looking side-on at the bottom of the outside cage of the derailleur. This should be approximately 3mm above the top of the chainring teeth. If it needs adjusting shift back into the small ring, loosen the mounting bolt again and move up or down the correct amount (making sure the cages are still parallel with the chainrings).

CHECK CABLE TENSION

Because of the forces used to shift the chain onto a larger chainring, your cable will stretch over time. and reduced cable tension can prevent shifts onto the big ring. If your bike has an inline barrel adjuster installed in





Tip

TENSIONING THE CABLE MANUALLY

If there are no barrel adjusters then shift the chain and derailleur onto the big ring (you might need to do it manually) then, this is the important bit, without pedalling, shift the derailleur into the smallest gear. This will release tension in the cable without having to fight against the derailleur. Loosen the cable pinch-bolt and pull a small amount of cable through (it only needs to be 1-3mm). Tighten the bolt firmly, pedal to check it goes into the small ring then shift back into the big ring, checking it goes in smoothly. Repeat if more cable tension is needed.





Alternative technique

 you can wind in the L limit screw to prevent the derailleur from dropping down before shifting into the smallest gear to adjust cable tension. Make sure to wind the screw back out again before you check shifting!





SETTING THE LIMIT SCREWS

Sometimes the derailleur can drop the chain off the small ring and into the frame or over-shift, pushing the chain off the big ring and down onto the crank arm — this can be prevented by adjusting the limit screws, as shown in the photo. Fortunately, most are sensibly positioned, with the screw adjusting low shifts (into the frame) next to the frame or labelled L (low), and high shifts (off towards the crankarm) nearest the outside or labelled, you guessed it, H (high). Screwing them in will restrict the movement of the derailleur in that direction.

choice), as they can round off easily.

Tip

Clean out the heads of

the screws thoroughly

screwdriver (flat-head is

normally my preferred

and use a good

Sometimes the limit screws need to be wound out to prevent rubbing of the chain on the derailleur cage. Make sure you are spinning the cranks when adjusting the screws either way to prevent overcorrection.





ENGINEERED FOR LIFE

LX760

The LX series is the product of an ongoing investment program in design and technology.

The LX760 has been engineered to light the darkest of nights for you, whatever the weather. The superb output is suitable for both on and off road environments and is supported by a Panasonic battery and remote handlebar switch.

Our team of designers and engineers are dedicated to researching new technologies, materials and manufacturing methods to ensure we deliver our quality commitment.

- I x Cree XML (U2) LED
- 760 lumens output
- Panasonic lithium ion battery
- Over heating protection system
- CNC aluminium heat sink
- High precision optical lens
- Side visibility
- Includes remote switch

760* LUMENS



AIR VENT COOLING SYSTEM





Cycling FITNESS+TRAINING

Should lazy people resort to doping?

Researcher says drugs are fair play for those who shun exercise. David Bradford reports

oping could be put to positive use in helping to motivate unhealthy people to exercise — that's the startling claim being made by an endurance expert at the University of Kent.

Controversy-touting scientist Professor Samuele Marcora reckons that prescribing psychoactive drugs such as methylphenidate to unhealthily inactive people to encourage them to exercise is no different, ethically, from prescribing nicotine patches to smokers to help them quit, or appetite-suppressants to obese people. He points out that inactivity is responsible for twice as many deaths as obesity.

Coaxed off the couch

The psychoactive drugs specified by Marcora are already widely used in the treatment of attention-deficit hyperactivity and narcolepsy, and also by students to improve memory and mental performance. However, they are banned by the World Anti-Doping Agency, so must not be used by sportspeople.

Marcora's suggestion is likely to raise

eyebrows among the cycling community. For many of us, the idea of using drugs to stimulate the desire to exercise sits uncomfortably and calls to mind the many cheating scandals of recent years. What's more, we regard exercise as something that itself generates motivational, positive feelings — without any need for pharmacological assistance.

CA asked the professor: isn't it better to coax people to exercise in the conventional ways, via role models, coaches, teachers, GPs and sports clubs?

"Of course, it would be wonderful if most of the population felt a strong psychological uplift from taking part in sport or exercise without the need for drugs," Marcora responded. "However, most people are not as motivated as recreational sportspeople.

"There has been a lot of

psychological research on how to get sedentary people to exercise regularly, but so far there is no effective way to increase long-term motivation to exercise in the huge amount of people who are physically inactive."

We regular cyclists are self-evidently motivated people, but for all of us there are times when — because of tiredness, time pressures or poor weather — it can be a real struggle to force ourselves on to the bike. On these occasions, could it ever be defensible to pop a pill to perk us up — or is that crossing a line into the realm of cheating and against the ethos of striving to test one's own willpower?

"Could it ever be defensible to pop a pill to perk us up?" This formed the basis of our second key question for Marcora: would he extend his recommendation to sportspeople?

"Modafinil and methylphenidate are doping agents, so I would not suggest their use to competitive athletes, as it would be against the rules of sport. With regards to caffeine, I know already of some elite athletes that use it to get more out of a training session when they feel tired and demotivated.

"However, in terms of performance, there is evidence that sometimes training in a state of mental fatigue helps the brain adapt to resist fatigue during a long race, so using caffeine to boost the intensity of every training session may be detrimental."

In summary, then, be grateful that you are a motivated individual with a healthy amount of willpower, and meanwhile don't hesitate to have a coffee to perk you up when you feel you need it.

As for those less fortunate, inactive types, perhaps we should remain open-minded about the extremity of the measures that may be required to prise them off the couch.





Inside the pain cave

Wintering in the pain cave

t happens. There are people who retreat to the pain cave in November and don't emerge until the end of February. In fact, there are cyclists, fewer in number but growing, who don't ride outdoors at all.

It seems incredible — but they have their reasons. And now they have a viable alternative in the form of what some are calling Indoor Riding 2.0. Smart trainers, computer-generated landscapes, a vibrant online community and racing three times a week is now 'cycling' for some people.

The riders who renounce the outdoors completely often have good reason: maybe they live in a mega-city, or in a climate where winter cycling is plain dangerous.

But this trend throws up fundamental questions about what cycling is, does it not? Can you really be a proper cyclist if the trees and clouds in which you immerse yourself are simply pixels on a screen? No. I don't think you can. You're just missing out on too much.

I'm as big as an evangelist as anybody for the tech toys, and the endorphin rush you get climbing off the trainer after a hard-contested race on Zwift is powerful magic.

But getting back from a cross ride covered head to toe in mud after a blast through a winter landscape and wolfing down beans on toast and a mug of tea is just as big a thrill.

Maybe it's just a question of variety. We should celebrate the alternatives that are now available indoors on dark weekday nights. But the weekend? Well, that's for outside.

Simon Schofield rides the turbo for fun and won't have a bad word said about it



Ingestible training tech could be on its way

Despite constant developments in training technology over recent years, researchers at the Massachusetts Institute of Technology may have opened up a new aspect within the field thanks to a digestible pill that can track heart and breathing rates.

Initially designed to make it easier to assess trauma patients or monitor soldiers in battle, it has inevitably shifted its focus into sport with results potentially being

"It's more accurate than an HR monitor"

used to improve training for professional and amateur athletes.

The researchers have suggested that the device is "like an extremely tiny stethoscope that you can swallow," which works by collecting sound from the heart and the lungs from within the gastrointestinal tract. It also provides more accurate results compared to current heart monitors, as well as being unnoticeable to the user after initially swallowed.

It may not be a long-term device with the sensors only having a lifeline of 24-48 hours; however, they can easily be replaced despite the pill-sized device consisting of a tiny microphone alongside electronics that process the sound and send radio signals to an external handset.

Recommended

Torq Recovery Drink

Where? Immediately after a ride What? Recovery supplement

Why? The importance of starting your recovery as soon as you step off the bike is crucial to replenishing carbohydrate and protein stores which may be depleted after a long ride. Torq's recovery powder has a simple-to-use guide of how much powder a cyclist should consume according to their body weight. The 3:1 ratio of carbohydrates to protein blend means you are replenishing energy stores while repairing muscle fibres at the same time.



As well as being suitable for vegetarians, these recovery shakes can be pre-made and stored in the fridge before you head out on a ride so they are immediately ready to consume when you return home.

Available in five delicious flavours including Cookies & Cream, it may well prove tricky sticking to just the one shake after a ride.

www.torqfitness.co.uk £19.99 for 500g tub (other sizes available)

Muc-Off Luxury Chamois Cream

Where? Before or during a ride

What? Chamois cream to reduce saddle sores

Why? If you are on the bike for long periods of time, a pair of padded bibshorts may not be enough to keep you comfortable. Muc-Off is better known for keeping bikes clean and well lubricated and this chamois cream does the same for your skin.

Easy to use, just apply the cream to the areas of your skin that are in contact with the saddle and may well

be vulnerable to friction. The cream washes away effortlessly off both skin and clothes with just soap and water so you can apply it liberally knowing that it won't ruin your cycling kit.

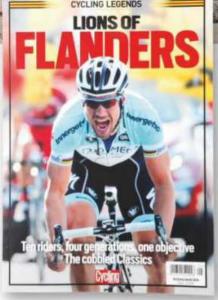
Enriched with aloe vera and shea butter, the soothing cream provides a moisturising effect as well as being antibacterial and paraben-free — perfect for those with sensitive skin.

£20 for 250ml tub www.muc-off.com



Steenbergen, Rik Van Looy, Walter Godefroot, Roger De Vlaeminck, Eric Vanderaerden, Eddy Planckaert, Johan Museeuw, Peter Van Petegem and Tom Boonen.

Lions of Flanders is their story. Told with exclusive interviews and observations from their competitors, using stunning photography that reveals the nature of these very special races and the men who win them, it's a must read for any cyclist.



ONLY £9.99

Available at all good newsagents and online at www.cyclingweekly.co.uk/shop with FREE p&p.



This month IT'S IN WITH THE NEW

January's training isn't an entirely fresh start as it builds on the work you have already been doing in December, but it does introduce two new ideas — your first extended blocks of sweetspot riding and your first forays up to functional threshold (see p107 to find out more about this simple, but useful training concept). If you haven't been riding much or following a dedicated plan don't worry, you can pick it up right now. Newcomers can simply replace the long ride in their plan with even-paced Zone 2 for the same length of time, and half the length of the work block in the FTP Hills session.



USING THE TRAINING PLAN

First choose your plan. The Challenge Plan is for riders building up to mid-distance sportives, events where you will be riding continuously for up to five hours. The Epic Plan is for those targeting 100 miles and beyond, in events that may also feature large amounts of climbing. So far so normal, but these plans are different. We don't tell you exactly when to do each ride. Instead we're going to give you the tools to fit the rides into your life. Just try to do similar rides on the same days each week, keep hard rides apart, and make sure you always take one day off riding each week.

Key sessions for this month



SWEETSPOT BLOCKS

Efforts in Zone 3b are the bedrock of cycling training. Arguably the most time-effective way to boost your overall cycling fitness, they push your functional threshold up from below without requiring the extended recovery of harder intervals.



LONG RIDE BLOCKS

This month's long ride continues the trend of previous months — mixing blocks of Zone 3a riding and a base pace of Zone 2. The blocks get longer this month, particularly in the Epic Plan as we continue to push and pull at your lactate threshold output.



FTP HILLS

While your Zone 3b work is pushing your functional threshold from below, your weekly short hills ride will now begin to pull at it from just above. Repeated pushes into the bottom of Zone 4 will take you right up against the maximum lactate level you can maintain and prompt your body to improve its clearance capabilities still further.



BIG GEAR SURGES

Turning a big gear slowly isn't all that hard, at least on the flat. The real skill is learning to turn that big gear fast and to accelerate against it. These sessions are a stepping-stone towards that, and towards being able to change pace effectively and efficiently.



STEADY-STATE SPINNING

Continuous, consistent effort right at Zone 2 is central to improving general aerobic fitness, but we'll combine it with some blocks of high cadence to add an extra layer of efficiency and technical skill (and possibly interest) to your ride.

GAUGING YOUR EFFORT

Improving your fitness and increasing your speed has a lot to with doing the right training, often enough, at the right time. That means knowing how hard to work and how hard you're working is key. The rides in our plans are described in terms of time in different zones. Hold the required level as evenly as possible for the time required and you'll know you're doing the right work.

Zone	Effort	You can	%MHR	%FTP (Power)	%FTP (Heart Rate)
1	Easy	Speak, sing and even dance!	65% or below	up to 55%	up to 68%
2	Slow	Chat freely	around 70%	56-75%	69-83%
3a	Steady	Just about hold a conversation	around 75%	76-85%	84-90%
3b	Brisk	Speak in single sentences	around 80%	85-90%	91-94%
4	Threshold	Bark short phrases!	around 85%	91-105%	95-105%
5	Hard	Only get out the odd word	around 90%	106-120%	106% or more
6	Very Hard	Grunt! Gasp! Pant!	N/A	121-150%	N/A

Terminology

Maximum heart rate

Heart rate is an indicator of how hard your body is working — the higher the heart rate, the harder you're working. Once you know your maximum heart rate (MHR) you can work out your own personal training zones — you'll need a heart-rate monitor.

You can use the following formulae to predict your MHR without even turning a pedal:

MEN: 214 – (0.8 x age) WOMEN: 209 – (0.9 x age)

For a more exact figure, use this simple test:

- Ride Easy for 15-30 minutes, finishing at the bottom of a long, steady hill.
- Ride up the hill for five minutes at a nice, brisk pace, then coast back to the bottom.
- Climb the hill again. Start at the same brisk pace, but this time increase your effort every 30 seconds. When you reach the point where you can push no harder, stand on the pedals and sprint until you have to stop.
- Coast back to the bottom and repeat step three again before riding home.

You'll probably hit your MHR somewhere towards the middle of the third ascent. (You will need a heart-rate monitor that records maximum heart rate to be able to perform this test properly).

Once you have established your MHR, simply use the MHR column in the table below to set your own heart rate zones.

Functional threshold

Your functional threshold (FT) is the best average effort you can possibly manage in one hour of non-stop riding. Thankfully, you don't need to suffer for an hour to work this out. Instead, use the following test ride (devised by Hunter Allen of Training Peaks) to calculate a 'real-world' FT:

- Ride Easy for 20 minutes.
- Do 3 x 1min at a high cadence (120rpm) in a small gear with one minute Easy after each.
- Ride Easy for a further four minutes.
- Ride as hard as possible for a further five minutes.
- Ride Easy for 10 minutes.
- Ride as hard as you can for 20 minutes.

Aim to finish the 20 minutes having given absolutely everything you have. (You'll need to be able to record an average power or heart rate for the 20-minute all-out effort.) Afterwards, work out the average power or HR for that final 20-minute effort, and multiply that number by 0.95. This will give you your FT, which you can then use to calculate your training zones, using the percentages in columns five and six, depending on whether your number is a heart rate or a power rating.



FUNCTIONAL THRESHOLD HILLS

It's the middle of winter, but we're turning up the heat on the hills this month.

Surprise surprise — everyone loves a hilly ride! This ride is similar to a short hills ride — two hours of Zone 2 with a middle block of 60-90 minutes where you push harder uphill. The difference is we're now pushing those

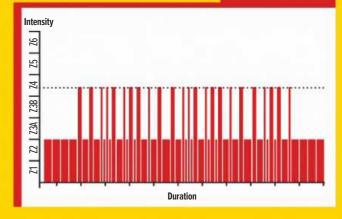
hills right up to Functional Threshold (see page 103). This can get tiring. By the time you get to halfway, you'll probably feel as if you're never riding easier than Zone 3a. If you have a power meter, you can focus on hitting the power targets that

you know will get you into the right zone, but if you're using heart rate or speed it'll help a lot if you stick to well-worn routes once more — because by now you should have a pretty good idea what speed you hold in Zone 2 at different points on the course.

month

FUEL REQUIRED	HOW MUCH?	WHEN?
Drinks bottles	1-2	Sip every 10min
Energy gels	1 (optional)	Just in case
Energy bars	0	0
Recovery drink	1	ASAP

80%	



SWEETSPOT BLOCKS

Blocks of Zone 3b effort are such a training staple these days, it's possibly a shock we've left them out of the plan so long.



Route selection is important for this ride (unless you do it on the turbo-trainer). Look for a quiet, fairly flat

route without technical corners, steep hills or traffic lights, and that takes about 20 minutes to get round. If you can find that, all you have to do is keep looping around it (anti-clockwise so that you never have to cross traffic) until all your blocks are done.

Rides like this also tend to be more effective if you take the time to do a structured warm-up before the efforts. Start with 10 minutes of Zone 2 at 90-95rpm, then gradually 'ramp' your effort to Zone 4 over the next five minutes. Take a minute of easy riding after that, then settle back into Zone 2 for a further four minutes. Once that's all done you can start your Zone 3b efforts. In the first week, do five five-minute blocks with equal-length Zone 2 recoveries after each. The second week, increase that to four seven-minute blocks, then settle at three 10-minute blocks in weeks three and four.

Use the lessons learnt on your hard hills rides to stop you going off too fast on each block, then settle in and keep your output even and your cadence around 90rpm.

How many times this month
Duration (mins)
Intensity

On the flat or a turbo.

you can do the 'ramp

in your warm-up easily

by holding 90rpm and

adding a gear every

minute.

FUEL REQUIRED	HOW MUCH?	WHEN?
Drinks bottles	1	Sip every 10min
Energy gels	1 (optional)	Just in case
Energy bars	0	0
Recovery drink	1	ASAP

85%





LONG RIDE BLOCKS

This month's long ride is an 'endurance sandwich' — two hefty slabs of Zone 3a bracketing a filling of Zone 2.



Doing a block of work early in the ride prompts your body to burn through stored carbs, a process that continues during the easier middle section. Even refuelling as you ride, you'll start the second block of Zone 3a pretty

depleted. And while that's unpleasant, it should prompt your body to store more muscle glycogen in the future, and to burn more

fat as fuel.

Start your ride with 10 minutes of Zone 2, then increase your effort to Zone 3a at 80-85rpm for 35 minutes. Ease back to Zone 2, and hold that for the middle of the ride — focusing on even pacing and eating and drinking to keep

Starting and finishing
your ride on the same set
of flat, predictable roads
each week will make it
easier to maintain a
consistent output
across both
blocks.

your energy levels topped up. At

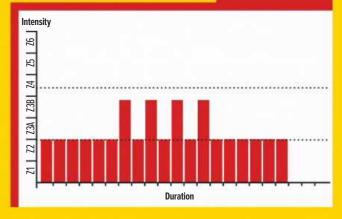
40-45 minutes before the end of the ride, lift the pace back to Zone 3a and do another 35-minute block followed by 5-10 minutes of easy spinning to cool down. Each time you do this ride this month, you can extend

the length of each Zone 3a block by 5 minutes by 'eating into' the Zone 2 riding in the middle and keeping the ride as a whole a consistent duration. While the ride itself isn't getting longer each week, the fact that the blocks of Zone 3a grow should leave you covering more ground and building greater overall fitness.

How man	ny times this month
4	X
Duration	(hr)

FUEL REQUIRED	HOW MUCH?	WHEN?
Drinks bottles	3-4	Sip every 10min
Energy gels	2 (optional)	Just in case
Energy bars	2-3	One every hour
Recovery drink	1	ASAP

Intensity		
\neg		
	' \ O/	
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STEADY-STATE SPINNING

At its heart, this is simply a way of adding a little more load (and a little more post-Christmas calorie burning) without making you suffer through really long rides in the cold.



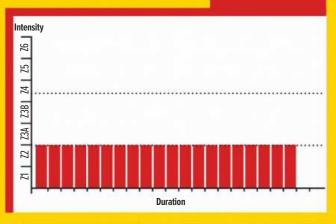
Head out on a flat route, and hold an effort at the top of Zone 2 for 90 minutes. Keep your cadence at around 90rpm apart from three 10-minute blocks at 105rpm. Spread the blocks out across

the ride, and stick to an effort that feels like Zone 2. Each week after that, increase the total length of the ride by 15 minutes, and increase the cadence in the blocks by 5rpm.

Try to ride 'normally' (in your usual riding position and without bouncing) during the high cadence blocks. If you do find you're bouncing, slow your pedalling until you settle and relax.

FUEL REQUIRED	HOW MUCH?	WHEN?
Drinks bottles	1	Sip every 5min
Energy gels	0	
Energy bars	0	
Recovery drink	0	





What is?

Intensity

Intensity is a hard concept to pin down. Is a 90-minute Z2 ride with two 20-minute Z3b blocks easier or harder than an hour of easy riding that contains six all-out 30-second sprints? In this plan, intensity is a guide to how hard the hardest efforts will be — the higher the percentage the more respect the session needs and the more likely it'll be you'll need to follow it with an easy or rest day.



FUNCTIONAL THRESHOLD HILLS

The building blocks of your fitness plan — expect to be doing this session a lot!



Your weekly short hills ride takes another step up this month. Not in terms of duration (that stays at two hours) or in terms of the length of the middle block (that stays at 90-110 minutes), and not even in terms of the underlying effort

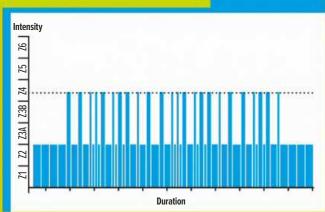
(which remains in the time-honoured Zone 2). But in terms of climbing effort there's a definite step change as we move up to Functional Threshold, hitting the climbs with a Zone 4

effort. If you've got a route that you've been using for rides like this, stick with it, but do expect to have to tack a bit of distance on to make up ride time as you speed up.

Stay in the saddle when you climb this month, and concentrate on shifting smoothly and frequently to carry speed up and over each rise.

How ma	ny times this month
4	X
Duration 2	n (hr)
Intensity	/

FUEL REQUIRED	HOW MUCH?	WHEN?
Drinks bottles	1-2	Sip every 10min
Energy gels	1 (optional)	Just in case
Energy bars	0	0
Recovery drink	1	ASAP



LONG RIDE BLOCKS

Wrap up warm as your long ride gets a little longer this month.



Your long rides in January continue using the 'endurance sandwich' structure that we introduced last month: 10 minutes Zone 2, a block of Zone 3a, Zone 2 for the bulk of the ride before finishing off with another Zone 3a

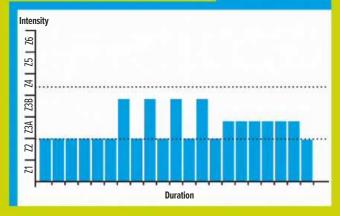
block followed by a 5-10 minute cool down. But — at the risk of piling lunch metaphor upon lunch metaphor — this month we're going to supersize it. Each week, your total ride time should increase by 15 minutes, and both Zone 3a blocks should increase by five minutes — starting from a three-and-a-half-hour ride and 35-minute blocks in the first week. As in December, keep your cadence at 80-85rpm in the Zone 3a blocks, and ideally do them on the same simple, predictable stretch of road.

This ride is going to really chew through your fuel supplies. Combined with the cold, it's likely to leave you very tired. The best way to handle that is to ensure you are awake and fed before you head out (a normal breakfast about an hour beforehand is best), that you've dressed to cope with the weather (especially given that you'll probably sweat quite a bit), and that you plan to rest rather than ride the next day. Give yourself extra points if you're also able to get to bed early and sleep in the night after the ride, and also if you fit in an hour's extra kip after your post-ride lunch!



FUEL REQUIRED	HOW MUCH?	WHEN?
Drinks bottles	3-4	Sip every 10min
Energy gels	2 (optional)	Just in case
Energy bars	2-3	One every hour
Recovery drink	1	ASAP

How many times this month
Duration (hr)
75%





SWEETSPOT BLOCKS

These blocks offer your first taste of the sort of repeatable effort you'll be hoping to climb at come the summer.



The initial focus for this session is to get you used to holding this higher effort consistently so that you can return to it again and again in future months. With that in mind, your first ride should only include two 12-minute Zone

3b blocks. The following week you extend those to 16 minutes each, before settling at 20-minute blocks in the weeks that follow.

You can afford to be fairly loose with the structure of this session, as long as the majority of the riding around the blocks is done in Zone 2, and as long as you leave at least 10 minutes between the blocks themselves. But it is worth doing a fairly structured warm-up. Start with 10-20 minutes of Zone 2, then spend five minutes gradually increasing

yourself. You want to finish each session feeling you could have given more.

Do not use these efforts

as an excuse to bury

your effort to Zone 4. Take a minute easy followed by another four minutes or so of Zone 2 before you start your Zone 3b work blocks.

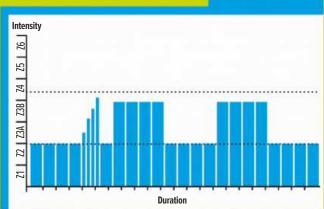
This approach to training is going to become a recurring feature of your

How many times this mon

This approach to training is going to become a recurring feature of your midweek rides from now on, so it's worth picking a really good route. A relatively flat, quiet circuit, without traffic lights, that you can ride anti-clockwise would be ideal. Local time-trial courses can also work well, but tend to be on busier roads.

How many times this month	
Duration (hr)	
1.5	
Intensity	
$O \Gamma$	

FUEL REQUIRED	HOW MUCH?	WHEN?
Drinks bottles	1	Sip every 10min
Energy gels	1 (optional)	Just in case
Energy bars	0	
Recovery drink	1	ASAP



EXTRA SESSION BIG GEAR SURGES

The pressure's on in this month's extra session.



Start with 10 minutes in Zone 2 at 90-95rpm then spend five minutes working through your gears — still in Zone 2 — decreasing your cadence as the gear gets bigger. By the end of the five minutes, you should be holding about

60rpm. Stay there for five minutes then increase your effort to Zone 3a and your cadence to 70rpm. Hold that for 40 minutes apart from the final 15 seconds of every fifth minute. For those 15 seconds, stay seated and in the same gear and drive your cadence up over 100rpm to create a short sharp

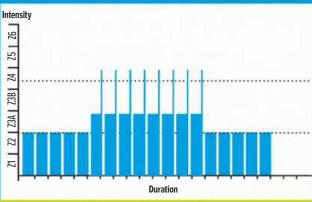
surge of effort. After each surge, drop back to 70rpm and Zone 3a and carry on with the block.

Once all the surges are done, finish the ride in Zone 2 at 90-95rpm. The following weeks you can make the surges more frequent within the 40-minute block — doing one every fourth minute the second week, then one every third minute the next, and finally one every other minute.

FUEL REQUIRED	HOW MUCH?	WHEN?
Drinks bottles	1	Sip every 5min
Energy gels	0	
Energy bars	0	
Recovery drink	0	







What is?

What is... Functional Threshold?

Everyone has a Functional Threshold (FT). It is, very simply, the best effort you can hold for an hour without stopping. It's a key indicator of performance — the faster you can go at FT, the faster you will be able to go at any other effort level other than sprinting — and it's closely related to your maximal lactate steady-state. This means it's a useful indicator of the red line you don't want to cross too long or too far if your goal is to cover long distances or perform repeated long efforts.





THE HOME STRETCH

Is riding inside a fad or the future of cycle training?

magine cycling from London to
Edinburgh in one go. It's roughly
500km, or around 310 miles, and a
serious feat of endurance. In fact
500km is a big benchmark for long
distance cycling and one to which
many endurance riders will aspire
— and relatively few will reach. Now
imagine doing that on a turbo-trainer.
No ever-changing scenery, weather or
terrain to distract you. No variation in
sights or smells. No traffic to force you to
concentrate. No mates to josh with. Just
endless churning going nowhere — it's
enough to make the mind boggle.

Yet some riders have already done 500km this indoor season and several

more will manage it. Others have 'Everested' indoors — climbing close to 9,000 virtual metres, the height of the Himalayan giant. Indoor centuries, metric and statute, are becoming common. Have some elements of the great worldwide fellowship of cycling taken collective leave of their senses? Some would say yes.

But others point to another explanation — the rise of virtual reality cycling, fired by 'trainertainment' — the idea that cycling indoors, with the help of a boatload of sophisticated tech, can be a viable alternative to riding outside with the wind at your back and the sun in your face.

It isn't. Let's get that clear. Cycling outdoors brings benefits, feelings and experiences that simply cannot be properly replicated when confined to a pain cave, no matter how luxurious or loaded with tech toys. And some coaches are dismissive of the tech-based virtual reality approach, claiming that the trainertainment model is nothing more than an expensive gimmick.

However, many other coaches agree that structured indoor cycling can build or maintain fitness; it can help with rehabilitation from injury; it can offer relief from foul or plain dangerous weather conditions; it can provide structured sessions that

are more difficult to do on the road and it can, for the time-poor, be the difference between cycling and not cycling.

So it can happily coexist with real cycling, rather than replace it, and it can make a contribution to fitness as long as it's part of a proper training programme. If that's the case, say the virtual cycling evangelists, then we might as well make it as good as it can be. And that's exactly what's happening. Virtual cycling is getting social and global, it's getting structured, it's getting exciting, with online racing, and for some, it's getting addictive. It's also getting expensive with some of the highest-end kit carrying price tags that would make even the most deep-pocketed blanch.

And it can be quite complicated — nobody wants to waste valuable training time fiddling with PCs, or apps or sensors on trainers. We're going to try to demystify the world of virtual cycling. Some of this stuff you might already know, but often the key to entering the portals of the virtual cycling world is knowing which combination of turbo, sensor, method of communication and software will work well together. We can't hope to cover every combination but we will cover the basics of hardware and take a closer look at the software options.

Gimmicky games or real training?

The explosion in options to cycle indoors and the new wave of smart trainers has sparked off a debate about the real training value of all this expensive kit. Let's examine the arguments.

The Old School Camp is most likely to say: "It's all smoke and mirrors. There's just no substitute for riding your bike outside in all weathers all year round. If you must use the turbo, man up, grit your teeth, get on it in the garage or the shed and get on with it."

The Tech Fetishists are most likely to say: "Move with the times. Like it or not, we live in a tech-driven world. Turbotraining doesn't have to be boring. Just because it's new doesn't mean it's

worthless. Look at Team Sky all the new stuff they did, and got laughed at for, is now standard practice."

The highestprofile indoor system is Zwift

and it attracts the most comment and controversy because it stretches the definition of turbo-training almost to breaking point. But the gamey-looking platform is underpinned by some pretty serious sports science. "Everything on Zwift begins and ends with data. It's all about watts — that is the normaliser for the thousands of different people of different abilities people using different trainers," says Steve Beckett, from Zwift.

What the Old School Camp probably find off-putting is that it looks like you're playing a game. But Beckett is utterly unapologetic: "Zwift is all about the game-ification of fitness and there's

nothing wrong with that. We would never say that Zwift can replace outdoor cycling but if you ride more indoors in winter you will be better outdoors in summer."

That's a big claim that's likely to have the Old School Camp frothing at the mouth and the Tech Fetishists breaking into a round of applause. So gimmick or training — what's the truth?

The answer is simple — it's how you, the rider, choose to use these tools. There's nothing wrong with having a noodle on

the trainer for half an hour, whether that be cruising round the island of Watopia on Zwift or doing part of the Col du Galibier in HD video. But, and it's a big but, this is highly unlikely to improve your fitness unless you

are starting from a very low base.

There are two keys to using virtual reality cycling as a serious training tool—firstly, you need to know your FTP, preferably using power, and secondly, you need to be following a proper structured training programme.

At its simplest, your FTP, or Functional Threshold Power, is the hardest pace you can maintain, in a sustainable way without blowing up, over an hour's ride. As a benchmark for training and setting the intensity of individual intervals which form the basis of your training plan, the FTP figure is incredibly useful. It's often thought more practical to test your FTP

"There's nothing wrong with game-ification of fitness"

hotos: Daniel Gould. Thanks to Zwift

on a turbo. And it's the training plan which will transform your indoor riding from random noodling to serious training.

Respected coach Jon Sharples, from trainsharpcyclecoaching.com, says: "It's the application of the training software that can really make the difference to fitness over winter. Using tools like Zwift, TrainerRoad or Sufferfest consistently is going to be much better for your improved winter fitness than sporadically training on the road.

"The main takeaway message is, if it works and you like it, and most importantly you use it correctly as part of a structured programme, you're going down the right path."

But Sharples cannot stress enough that indoor riding needs to be part of a plan if serious fitness gains are going to be made: "Having cool tech-based training techniques is a great tool to have, but without a direction or a goal, you won't be spending your time very effectively. We sit down with our athletes and assess a rider's strengths and weaknesses and use the dedicated training techniques to target your weaknesses, or bolster your strengths.

"For example, if a training tool has a dedicated sprint session, and you know your sprinting is quite weak, integrating these into your programme, monitoring your performance and tracking them

over time is going to be a great way of taking your training to the next level."

But no matter how much fun things like Zwift can be — and Sharples is a fan: "If Zwift makes training fun and gets you excited to jump on your bike and go for a ride, even if it is round an online island, it's a really positive step in the right direction" — cyclists should make sure they get out into the real world in winter.

Says Sharples: "There are many advantages to training on the turbo, but if you want to get better at road riding, you have to train on the road. Bike-handling skills, changes in pace and improving your souplesse are all things that can only be completed while riding your bike."

WHAT'S IT LIKE RACING ON ZWIFT?

Attacks, drafting, chase groups, breakaways, dropped riders and sketchy corners – they all exist in the virtual world of Zwift racing. As a way of getting a competitive, hard workout leaving the body full of endorphins, Zwift works.

Races tend to be organised via Facebook groups with Tuesdays and Thursdays at 6.30pm British time being popular slots. Many riders will cruise round the course for a few miles first as a warm-up, before congregating at an ordained point on the course for a neutralised start. The virtual commissaire's flag drops and we're racing.

I joined a race on Zwift's **UCI-approved Richmond** course - a virtual representation of the recent Worlds course. Because I was honest about my weight (80kg) I expected the three steep, short climbs on the three laps of the 10-mile course to put me at a disadvantage. It must be said that not all riders are as candid about how much they trouble the scales and there's a vibrant debate in the Zwift community about how this "z-doping" can be effectively countered.

Sure enough, after holding my place in the pack for a few miles on the approach to the climbs, the uphill saw the lighter, stronger riders forge ahead. Up to that point, it's not unlike a crit race over a flat course. By controlling the power you put down, using cadence and torque, you can adjust your position in the bunch with real precision. It's not instant, like in the real world. There's a very short lag between what you do and its effect on your avatar, but you quickly learn to deal with the delay to tuck into the bunch and benefit from the draft or decide to put your nose in the wind.

Judging where you are when part of the peloton is easy — it's on the screen in front of you. As the stronger riders' avatars disappear from view, you can see how

far ahead they are, in time, by keeping a close eye on the live leader board. Likewise, you can see who might be surging up from behind to join you. I hooked up with another couple of riders and we engaged on what proved to be a fruitless chase. We duelled between us, swapping turns, so there's still plenty of interest even if dropped from the main pack.

The standard in the race I joined was high. I finished well back from the leaders over a race lasting 1hr and 13mins. For those interested in numbers, over the race I averaged 260W, which gives me 3.25W/kg. This is the most crucial metric in Zwift and it's displayed for each rider in real time. The winners are going at well

over 4W/kg, which makes them strong riders.

How valuable in training terms is 73 minutes at 260W, which in my case is 90 per cent of FTP? It's probably about the same effort level as I'd put in over a cat 3/4 crit, which would perhaps be half an hour shorter. So, it's a very decent workout.

Races over flatter courses would obviously keep the field more bunched and as the platform grows it may well be that races are organised in separate categories, again like the real world, so that heavier or less fit riders can compete. But whatever your ambitions for the podium, online racing beats a standard turbo session into a cocked hat. Give it a go.



VIRTUAL TRAINING: THE CHOICES

Software

The good news on software for indoor cycling is that the FE-C protocol we mention in the hardware section is being widely adopted — and that means that most software will work on most trainers. So what's out there?

Zwift \$9.99 per month

It's got big bucks behind it. It's had 50,000 riders on its beta version. The company thinks it can recruit a million riders and become a brand new media channel for cyclists — a place where manufacturers will launch new bikes, amateurs will ride alongside pros and where races which attract both participants and an audience will be hosted. Zwift is nothing if not ambitious.

If you haven't already seen it, then Zwift looks like a computer game. With the right trainer hooked up to it, you can ride and race alongside fellow VR cyclists from all over the world. There are climbs, flats and descents in Zwift's worlds — with drafting, virtual elbow flicks and jerseys for winning sprints and climbs.

With 40 people, most of them programmers and coders, working at offices in California, London, Tokyo and Rio de Janeiro, Zwift is a fully fledged high-tech new media start-up that happens to be working in cycling. According to Zwift's Steve Beckett: "We attract two types of cyclists — the enthusiast who is not using structured training but is riding for fitness and fun and the committed, competitive cyclist who is using it in a structured way."

In its early days Zwift probably appealed more to the fun and fitness rider — people who want to ride indoors in a social environment and are possibly not using the platform as a serious training tool. But the next phase of Zwift's development is going to offer more to the rider who wants to train seriously indoors. It's just introduced its first 'structured training module' and it's planning to launch a series of how-to videos aimed at helping riders to understand the sports science behind training with power.

VERDICT We don't think Zwift would be first choice for someone who is going to use the pain cave as the focus for much of their structured winter training. That may change as it develops its serious

training aspects. But not all sessions inside need to, or should, be ridden at high intensity and what Zwift has absolutely cracked, even at this early stage, is social indoor riding. It is great fun to hook up with other riders and either cruise around a course with them or challenge them to a sprint or a race up a climb. More formal races are held on Zwift, organised by the community (see box) and they are a very hard workout which, at the front, would challenge the fitness of many riders. It is a highly professional platform that's well-executed which is both easy to use and accomplishes its aim – to make turbo training less boring. One to watch.

TrainerRoad \$9.99 per month

Now well established, with probably the biggest library of structured workouts compiled by a coach anywhere on the web, TrainerRoad is the software of choice for those who are serious about training in the pain cave. There are no game-ified distractions or visual gimmicks. The screen is a series of blue blocks of pain, made up of intervals which are calibrated according to your personal FTP. And finding your FTP is made simple by TrainerRoad, which has an easy-to-follow template for the test.

Most people tend to use TrainerRoad in one of two ways. Either you can dip into the workout library to find a session

that's right for your programme, devised either by yourself, or perhaps a coach. Or you can follow one of TrainerRoad's own training plans which cover everything from improving climbing to training specifically for a 40km time trial.

VERDICT If you retreat to the pain cave to make a serious effort to improve fitness it's hard to see many better options than TrainerRoad. There is little on which to concentrate, other than the pain of getting through the interval — but those who like a fiddle with technology can successfully combine Zwift and TrainerRoad so that the latter's intervals can be completed in the former's environment.

Sufferfest Videos and plans priced individually

Sufferfest tries to give the best of both worlds. It offers the visual stimulation of watching excerpts from high quality pro races with the training challenge of matching the action on your trainer. If you use Sufferfest in combination with TrainerRoad, which is easy to do thanks to some smooth integration, the challenge is aligned to your personal FTP. This means that if you're in the final sprint in a race, you will need to stamp on the pedals to meet the wattage or HR target set by the demands of the sprint. It's a kind of disguised interval. Like TrainerRoad, there is authoritative



coaching expertise behind each video and the Australian company also offers training plans.

VERDICT Our experience of Sufferfest is that most of the videos which are integrated with TrainerRoad are a really challenging workout and we are not alone in occasionally reaching for the "button of shame" which reduces the intensity of the workout in percentage steps.

Tacx Trainer Software Included with some trainers. Standalone price: €125

There is almost nothing that this very comprehensive software suite won't do. It includes the ability to ride HD videos of dozens of legendary climbs and courses; it has a series of Zwift-like virtual worlds with online racing and it has a TrainerRoad-type set of intervals programmes. Some of these features incur additional costs. In the past the software has struggled with a couple of problems. Historically it has been buggy and frustrating — but recently great strides have been made to solve these problems, with a lot of success. Secondly, it's always been 'tied' to Tacx hardware. This has also changed with Tacx's adoption of the FE-C protocol. Tacx have been real pioneers in the virtual reality training field and many users are happy, especially given the coverage of all forms of virtual reality.

VERDICT In trying to do everything, Tacx has arguably suffered by not being able to do one thing extremely well. Its rivals, like Zwift and TrainerRoad, have specialised in one area and that shows. That said, if you get the Tacx software it's a suite that gives so many options—you can do something different every time you get on the turbo.

Virtual reality video Various prices

In our experience, riding virtual reality climbs and courses is less useful for serious training as intervals can be achieved but they are dependent on you deciding to lift the pace and hold it without the benefit of 'instruction' from the software. But they can provide relief from the blue boxes of pain or chasing cartoon characters round a fictitious island.

Two of the better providers, because they are specialists, include Fulgaz (fulgaz. com) and VeloReality (veloreality.com) but software from Cycleops Virtual Training, Kinomap, Elite Real Training, and Bkool are also worth checking out.

Hardware

The big divide is between 'smart' and 'dumb' trainers. Smart trainers almost all plug into the wall, have inbuilt ANT+ or Bluetooth capabilities, are resistance controlled, and the better ones have power meters incorporated. Lots of jargon – what does it mean?

Mains-powered is self-explanatory. With a tiny few exceptions, these trainers need electricity to work and are big heavy lumps of metal that are more suited to a permanent home than dragging out of the car to warm up for a time trial or a race.

ANT+ and Bluetooth capabilities mean that the trainer can communicate with your PC, tablet or phone, as long as your device has a suitable ANT+ dongle. This means that the trainer can communicate with a large variety of apps or programmes that provide training sessions or entertainment or both.

Resistancecontrolled trainers
do what they say
on the tin. Using
ANT+ or Bluetooth the training
programmes or
apps instruct the
trainer to provide a
certain level of
resistance, regardless of
cadence or gear selection on

cadence or gear selection on the bike attached to the trainer. In simple terms, if your training programme on the computer is asking you to do three minutes at 300W, the trainer will automatically adjust the resistance to 300W, whether you are spinning at 100rpm in 53-25, or grinding at 60rpm in 53-11.

Incorporated power meters measure the power you are putting through the pedals in watts and transmit it to your head unit, and also to the app or programme you're using.

Unsurprisingly, smart trainers with all the bells and whistle aren't cheap. The most fully featured are the Wahoo Kickr, the Tacx Neo and Genius, the CycleOps Power Beam series and the Elite Series. These range in price from around £700 to over £1,100. It's a considerable investment, but for the outlay you are getting very well-built

machines which should have a long life and will work with most, if not all, virtual reality and training programmes. Additionally, these machines include accurate and consistent power meters and the measurement of power is a step-change in the ability to quantify, monitor and track your training if you don't have a power meter fitted to your outside bike.

'Dumb' trainers is the rather unkind label attached to conventional turbos. Unless these are converted to smart trainers, they won't work with the whizzy virtual reality and training programmes. The good news is that conversion is possible, depending on the type of dumb turbo and

secondly, many turbo
manufacturers are
now refreshing
their ranges, even
at budget and
mid-range levels,
to rebrand their
machines as
smart, even
though they don't
have all the features
of the expensive 'true'
smart trainers.

Conversion from dumb to smart can be as simple as buying a speed/ cadence sensor and an ANT+ dongle for your PC or phone or tablet. With the vast numbers of turbos on the market it's impossible to say

whether your existing or new dumb trainer can successfully be converted. The best way forward is to choose the type of software (see box) that you are likely to ride the most and research whether your existing or new trainer is 'supported'. In general this means that the software providers have tested the turbo to see if it works well with their product when the correct sensors are added.

Increasingly the big turbo manufacturers are also now offering smart turbos at lower prices, with refreshed ranges that add in some of the required technology. Expect to pay north of £250 and up to around the £600 mark for these trainers. At this level it's unlikely that you will get all the features of the higher-end models — accurate power meters or the ability to control the resistance automatically will be missing at the budget levels.



Oily fish Are you getting enough?

Oily fish isn't just good for your heart — this potent anti-inflammatory food also boasts myriad performance-enhancing benefits

ily or fatty fish are known for being rich in omega 3 acids — a group of longchain polyunsaturated fats that are vital for normal metabolism (earning them the name essential fats). It's interesting therefore that our bodies don't

actually have the capacity to make them — instead we must get them from our diet, which is where it gets tricky, because oily fish are pretty much the only good source.

Though some plant foods do contain omega 3 (walnuts, chia, linseeds) it's the shorter chain variety known as alphalinoleic acid (or ALA for short). The body then has to convert this to the crucial longer chain fatty acids EPA and DHA (or eicosapentaenoic acid and docosahexaenoic acid), which the body does at a very low rate — around 5-10 per cent. There's also evidence that our bodies do this even less efficiently as we



"I aura Tilt Dhoto: Eotolia

age. Oily fish on the other hand contain the more potent EPA and DHA in significant amounts thanks to the algae in their diet, which means eating a few servings of fish per week or taking a fish oil supplement is the easiest way to meet your omega 3 needs.

Performance benefits

The nutrients in oily fish boast a wide range of well-researched benefits for cyclists. Fish is high in protein around 25g in an average salmon fillet, the recommended dose to support muscle recovery after a hard training session.

Since protein requirements are increased with regular endurance or strength training by up to a third or more, eating a protein-rich food at each meal is a smart move, but choosing oily $fish\ may\ actually\ trump\ other\ protein$ sources because omega 3 fats boost the anabolic effects of training.

In one 2012 study, older women assigned to receive a daily fish oil supplement (two grams) for three months alongside a strength-training programme gained more muscle strength and functionality than an exercise-only group. Similar results have been seen in healthy adults, where a daily supplement increased the activation of mTOR (the protein that regulates new muscle synthesis) by 30 per cent more than a control group.

"Fish oil can limit muscle soreness and stiffness after exercise"

SUSTAINABILITY

It's hard to ignore the sustainability aspect of eating fish, when stocks are rapidly being depleted. To buy sustainably, look for Marine Stewardship Council (MSC) certified products (see www.msc. org) or check out The Good Fish Guide from the Marine Conservation Society (www. fishonline.org) for a simple explanation to the most ecofriendly choices — herring, anchovies and pink salmon are at the more sustainable end.

It's thought the anabolic effects are down to the ability of fish oils to improve insulin sensitivity, which means carbs and proteins get shuffled into the muscle faster. But it's not just $improvements\ in\ muscle\ mass-higher$ levels of omega 3 have been associated with lower levels of stored body fat and increased fat oxidation. In a 2010 study from Gettysburg College in Pennsylvania, men and women assigned to receive a daily fish oil supplement (4g) for six weeks experienced a significant (1.3kg) reduction in fat mass.

Muscle recovery

Spending hours on the bike can result in tiny tears in the muscle that leads to muscle soreness and limited mobility, which all too often interrupts training. Omega 3 fats can help alleviate pain and inflammation by blocking the conversion of pro-inflammatory hormones in a similar way to ibuprofen or other non-steroidal anti-inflammatory drugs.

In a 2011 study from the Exercise Physiology Laboratory at Urmia University, untrained men supplementing with 1.8 grams of omega 3 per day showed fewer markers of muscle damage and inflammation after eccentric exercise. Similar results have also been found with lower doses (300mg daily) in women. Research also shows that fish oil can limit muscle soreness and stiffness after exercise, thus improving recovery.

Immune function

Fish oils offer another relevant plus for cyclists — and that's boosting immune function. One of the consequences of intensive training is a dip in immune function, which increases the risk of opportunistic infection in the hours after a hard session on the bike, or during multi-day events. Research from Michigan State University suggests that fish oils can boost the activity of white blood cells, which help fight infection.

How much do we need?

In the UK there are no specific guidelines for the amount of omega 3 we should be consuming, but its recommended we aim for two servings of fish each week, with at least one of these being oily. This provides around 450mg of EPA and DHA per day — the amount found in around one gram of good quality fish oil.

If you're considering a supplement, the FDA advises adults can safely consume a total of 3g per day of combined DHA and EPA, with no more than 2g per day

coming from dietary supplements, due to the fact that they thin the blood.

Make sure you choose a reputable brand and look at the amount of omega 3 provided, rather than the amount of fish oil — for example, 1,200mg fish oil refers to the amount of oil in the capsule, not the omega 3 content.

For a more natural route, incorporate a couple of portions of oily fish per week - fish has other benefits aside from omega 3 that make it a beneficial choice, plus regular consumers of fish are at lower risk of depression, stroke, and even Alzheimer's.

Omega 3

Fish richest in omega 3:) mackerel, freshwater trout, herring, fresh tuna, salmon, sardines, anchovies.

Longevity



Harvard researchers found **Ω3**) the biggest fish eaters (calculated by the amount

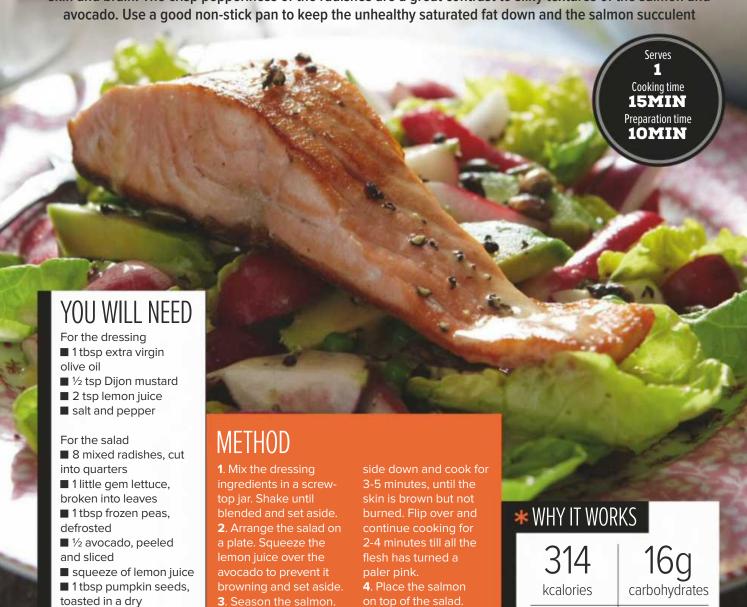
of omega 3 in their blood) live more than two years longer than those with the lowest levels

Mercury

One of the risks associated **Hg** with eating oily fish is the presence of heavy metals and pollutants, although experts agree that the benefits of eating fish far outweigh the risks. Predator fish like marlin and shark contain the highest levels, whereas smaller fish such as herring and sardines contain much less. Marlin, shark, swordfish and king mackerel should be avoided by women who are pregnant or planning a baby and limited to one portion per week for the general population.

PAN-FRIED SALMON WITH RADISH, AVOCADO AND PUMPKIN SEED SALAD

Salmon, avocado and pumpkin seeds are all packed full of healthy omega 3 fats that are great for your heart, skin and brain. The crisp pepperiness of the radishes are a great contrast to silky textures of the salmon and avocado. Use a good non-stick pan to keep the unhealthy saturated fat down and the salmon succulent



Sprinkle with a few

dressing and serve.

drizzle over the

more pumpkin seeds,

pan with cooking spray.

When it is smoking,

add the salmon, skin

28g

protein

frying pan

■ 1 x 100g salmon filet

■ olive oil cooking spray

■ salt and pepper

OMEGA 3 STEAK DINNER CHARGRILLED TUNA WITH SALSA VERDE

The joy of a steak with the nutritional benefits of low-fat, omega 3-laden fish, this great tasting, easy-to-prepare meal will feed tired muscles with plenty of protein

YOU WILL NEED

- 4 (100g) fresh tuna steaks
- 2 tbsp lemon juice
- ½ tsp ground Szechuan pepper
- 1 tsp olive oil

For the salsa verde

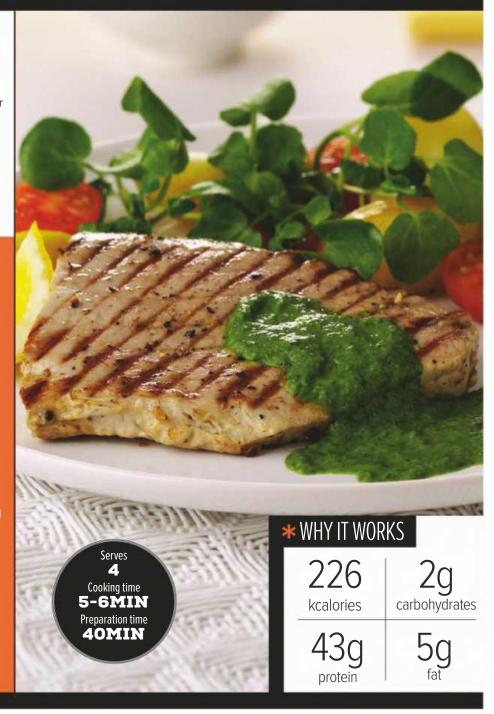
- 1(85g) bag watercress
- 2 tbsp fresh basil leaves
- 1 clove garlic
- 2 tbsp lemon juice
- 2 tsp olive oil

METHOD

- 1 Place the tuna steaks on a plate, mix together the lemon juice, pepper and oil and pour over the fish. Cover and leave to marinate in the fridge for 30 minutes, turning once.
- 2 To make the salsa verde, place all the ingredients in a food processor or blender with two tablespoons of cold water and blend to form a smooth paste. Season to taste.
- **3** Heat a large griddle pan and add the tuna steaks. Cook for 5-6 minutes, turning once until the fish is chargrilled on both sides but still a little pink in the middle. Serve with the salsa verde and a salad.

Cook's tip

This recipe also works well with prawns. Clean 350g/12oz raw king prawns, peeling away the legs and removing the vein which runs along the back if necessary. Marinate and cook as above.



PRODUCT FOCUS **FITNESS+**

SECRET-TRAINING.COM

What's in your energy del?



Nutrient value

30-60g

of carbohydrate per hour



Hourly needs

gels



When to take

After

of riding

Not all energy gels are the same. Here, *Cycling Active* explains how and why

roken down, the act of cycling is: spin the pedals, make the wheels turn. However, this motion can't be continuously repeated for hours on end without the body having sufficient energy stores.

The energy required while out riding comes from carbohydrate primarily — that eaten beforehand and stored in the muscle in the form of glycogen, as well as that consumed while we ride.

Carbs are found in everyday food, and most of us don't struggle to eat enough, in our normal meals, to refuel from rides and to keep our muscle energy stores full. However, these stores hold only enough for around two hours of exercise, so require topping up throughout the ride. When it comes to getting the necessary carbohydrate into the bloodstream fast, energy gels are an effective means.

Varying consistencies

There are a number of gels on the sports nutrition market, but despite their similar appearances, they're not all the same. Isotonic gels are perfect for quick absorption into the bloodstream; their isotonic nature means that their tonicity is similar to that within the body. This means the osmotic pressure of the gel is similar to that of the cells within the body, meaning easy movement of molecules between the gut and bloodstream. Molecules move by osmosis from more concentrated (hypertonic) into less concentrated (hypotonic) solutions, until the point of equalibrium is reached (isotonic).

If a gel is too highly concentrated (hypertonic) and not taken with water, it won't be absorbed as quickly and may cause digestion problems. This occurs with gels that have a syrup-like consistency or energy chews, which aren't as soluble as isotonic energy gels and are classified as hypertonic, i.e. they need to be taken with additional water.

The differences aren't solely down to the amount of carbohydrate digested. There are a variety of types of carbohydrate used in

energy gels. These are glucose, fructose and maltodextrin. Having a blend of carbohydrates could be more beneficial for faster absorption when compared to just a single carbohydrate source.

When do I need to use gels?

Some solid foods that provide carbohydrate are impractical to take with you on the bike. If you are riding for less than 60 minutes, you probably won't need to supplement with energy gels, as your body will have enough glycogen stored to fuel your exercise. However, for rides longer than an hour, you may need to top up. For each hour of exercise, 30-60g of carbohydrate should be consumed to maintain optimal performance. Caution must be used with energy gels, as consuming any more than this recommended intake won't yield any benefit. In fact, it could even have a detrimental effect on performance, as too many gels may cause gastric stress.

Gels that look similar may contain different ingredients. How to separate the marketing jargon from the real, substantive differences?

There are a wide range of variations available from a range of different nutrition brands; some products provide only carbohydrate replenishment — such as those included in this test — whereas others contain additional ingredients aimed at effecting different types of performance enhancement. It's important to remember that, if you are taking an energy gel for its carb content, the additional ingredients are non-essential 'added extras'.

Crosshead here

Some energy gels contain caffeine, which is a stimulant. These gels contain 25-100mg of caffeine. This can lead to a performance boost if used correctly but can also result in a comedown after the initial lift — similar to the effect of your morning cup of coffee.

Other gels contain electrolytes, which may be worthwhile on hot days when you are sweating more heavily. Sweat contains vital salts which these gels aim to replace — the electrolyte content commonly includes sodium and potassium.

"The differences amount to more than just the quantity of carbohydrate; there's the type too, as well as the other ingredients"

IMPORTANCE OF MICRONUTRIENTS

The first check is how much carbohydrate does each gel deliver and from which source or sources. Slick professional packaging can sometimes hide flaws in the makeup of each nutrition product. Not every gel is equal.

This was shown to be the case in a recent study published in the International Journal of Sports Nutrition & Exercise Metabolism.
Researchers found that, from the 31 different gels tested, 20 per cent didn't contain the amount of carbohydrate required. What's more, there was an extreme variation in osmolality at both ends of the range.

These differences can have implications on both gastro-intestinal discomfort and affect the total fluid intake required to optimise carbohydrate delivery and oxidation.

Some energy gel manufacturers have increased the protein content of their products; and you can even find protein gels with very little carbohydrate content. These may be good for promoting early muscle recovery, but won't help replenish energy when out on the road.

There are a few ingredients in some energy gels that provide no significant performance improvements. These include amino acids, vitamins and anti-oxidants — probably better taken through other sources and in more significant doses. The main purpose of the energy gel remains — you guessed it — providing energy.

Verdict

Energy gels are a crucial part of a cyclist's on-bike nutrition because they are such a practical way to take carbs on board. They are easy to consume before big climbs or sprints, and make it easy to carry enough fuel for very long rides. Use them throughout your ride, based on the duration and intensity of your ride.

As with all nutrition goods, taste matters. Luckily, the top brands have shifted away from sickly, overpowering flavours, but it is still a good idea to test different products for their palatability. Remember, on-bike nutrition isn't about just sticking with one product; combining drinks with bars and gels provides a much more enjoyable and balanced approach to nutrition.

SiS Go Isotonic Energy £34.99 (box of 30)

The Go isotonic energy gel is just a small part of SiS's extensive range of nutrition products. SiS products have been reliably used by cyclists for a number of years

weight Kcal

carbohydrate

with a shift to a more professional focus coming next season as it becomes Team Sky's official nutrition partner. Go Isotonic has a clean, refreshing taste and its liquid consistency makes it very easy to swallow.

Each 60ml gel contains 22 grams of carbohydrates with less than one gram of these carbohydrates made up of sugars,

meaning that your energy boost won't just have a short-term effect. Available in seven flavours so you have plenty of choice when it comes to personal preference, from the usual orange and blackcurrant flavours to the less common pineapple and pink grapefruit. Don't be put off by these tropical flavours, as the taste is not overpowering and they provide a slightly sharper flavour.

This product is a good choice if: you want a wide variety of flavours

www.scienceinsport.com

PowerBar Performance | OTE Energy Gel **Smoothie** £19.20 (box of 16)

Powerbar's Performance Smoothie is the biggest gel on test, weighing in at 90 grams. Unlike the other gels featured, its screw top opening may not

> be the most practical for a nutrition product whilst on the bike, requiring two hands to open, or one with a little practice.

However, this does mean that if you don't fancy taking the gel in one hit, you can reseal it and save it for later on, something you may well choose to do given its size. Perhaps unsurprisingly, the large Powerbar gel

provides more carbohydrates than its rivals in this test, offering a whopping 28g, making it ideal for longer rides. Available in banana, blueberry, apricot peach and mango, and apple, PowerBar may not have as many taste options as other companies but the ones they do have are full of flavour.

This product is a good choice if: you want a larger gel that packs a bigger carbohydrate punch in a resealable pouch

www.powerbar.eu

Kcal

carbohydrate

£20 (box of 20)

OTE prides itself on developing, designing and manufacturing its products in Great Britain. However, one of the most standout and recognisable

Kcal carbohydrate

features across OTE's products is the unique wrapper that has two openings. One allows a rider to sip the gel over a period of time while the other opens wider so you can gulp it all down in one. This 'dual delivery system' is a theme that is continued with the actual contents of the gel itself, as it combines the carbohydrate sources of fructose

and maltodextrin. All of OTE's products are gluten-free as well as being suitable for vegetarians and vegans. Its energy gel can be found in lemon and lime, orange, pineapple and blackcurrant flavours. It also includes natural juices in each gel's recipe, which eliminates the need to add any artificial flavourings and sweeteners.

This product is a good choice if: you want the option to sip or gulp your energy gel

www.otesports.co.uk







Stealth Advanced Isotonic Energy Gel £20 (box of 14)

A company founded by Tim Lawson, a former European champion track cyclist, Secret Training has over 20 years experience developing cycling-specific

66g weight 86 Kcal 22g carbohydrate nutrition products. The Stealth comes in three light, juicy flavours citrus, lemon and lime, and tropical — with a texture that is smooth and not sticky. Each gel provides 22 grams of carbohydrates that come from number of energy substrates, which include sticky rice starch and fructose so energy is released at varying rates. They are also the official nutrition

supplier to pro cycling team Tinkoff-Saxo — so thanks to Peter Sagan, they can now boast that they've fuelled a world champion. As well as being suitable for vegans, Stealth Advanced Isotonic Energy Gels are sweetened with the natural sugar substitute stevia, which consequently reduces the sugar intake per gel.

This product is a good choice if: you are looking for a gel with reduced sugar content

www.secret-training.cc



High5 IsoGel £24.75 (box of 25)

High5 sports nutrition is a big supporter of amateur cycling and is often seen promoting its wares at events such as the prestigious RideLondon 100 sportive. A

weight

95

Kcal

230

carbohydrate

slightly lighter consistency than High5's Energy Gel means that the IsoGel is almost halfway between an energy drink and a gel. This means it causes little digestive stress. Each gel contains 23 grams of carbohydrates which come in the form of glucose and maltodextrin. Unfortunately, they are only available in two

flavours, orange and berry, a somewhat limited choice compared to some of the other brands that offer a much larger variety of flavours. That's not to say these flavours are bad, as they are both very palatable. There is also the additional plus point of being the least expensive in this test without losing out on anything in terms of nutritional performance, taste or quality.

This product is a good choice if: you are looking for a good value gel www.highfive.co.uk



NATURAL ALTERNATIVE

Raisins

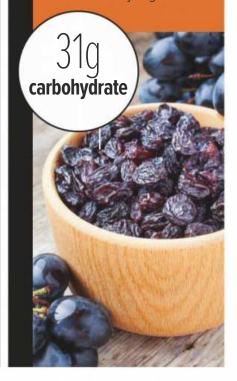


The main positive of energy gels is their convenience of use on

the bike. However, if you'd prefer to eat something more natural, there are plenty of alternatives — such as raisins. With a bit of practice raisins can be just as easy to use on the move whilst providing similar energy-boosting properties, with 31 grams of carbohydrates present in a quarter of a cup-sized portion.

But can raisins be a practical way to access a natural blend of carbohydrates while still focusing on improving sporting performance?

This theory was applied within a scientific study published in the *Journal of Strength and Conditioning* in 2011, which found that raisins were just as effective as carbohydrate supplementation as sports jelly beans. This study also pointed out the financial benefits that come with raisins, as they are far cheaper than energy gels. If you can accept the usability issues, raisins could be the way to go.





eet Dr Will Mangar, the race doctor of the Tour of Britain, the man who has quite possibly the most important job during the week-long stage race - and also the most stressful. For eight days straight, Mangar is up at the crack of dawn and out for a jog around whichever town he happens to be in that morning. It's the only time he gets to himself before the circus awakens.

"I get up at about 6.30am and go out for a run. During the day, I'm sitting in the car for about 10 hours, so it's important for me to do something physical in the morning to get the brain going. But it's not long before I get a call from a team directeur sportif, asking me to go and see one of their riders before they head down to breakfast.

"A rider might not feel well and has gut problems or food poisoning, or they may just want a check-up if they had a crash the previous day."

Mangar barely gets time to shove a spoonful of porridge in his mouth before he's heading off to the start of the stage, hustling his car into position at the front of the convoy, just behind the commissaire president. After a quick ward-round among the team buses, Mangar is back in the car following the pack, ready for whatever is thrown his way.

Painkiller

"A lot of the time, while I'm in the car, I'm dealing with small issues. Riders will drop back to pick something up, or perhaps they have fallen off and just need a bit of bandaging. Sometimes they'll ask for painkillers or hay fever medicine. In some cases, I'm applying some sunscreen."

These might seem like trivial tasks, but Mangar's mind is never switched off. "The whole day is mentally fatiguing, as you're always on alert. For me, the busiest part of the day is the final 25km of the stage. The tempo is higher and there's a lot of traffic on the roads. It's so important that you are in position. It's very easy for the doctor's car to get pushed to the back of the convoy by team cars.

"Then, as the finish nears, riders become more anxious, and the likelihood of crashes is higher. Having said that, paradoxically, in the first 10km after the neutralised zone, often because the riders are a little bit nervous, the risk

of crashes [is increased] - it takes a good 15 minutes for the riders to calm down.

"We've been quite lucky this year, as the riding has been of such a high standard; there was very little in the way of actual on-the-road crashes. Apart from one or two, the majority were low-spill."

Unique position

There were some big incidents at this year's Tour of Britain. Footage published

"My route into cycling"

"Working in cycling has been a passion for me. I'm a keen time with a lot of cyclists, and was introduced to the Tour of Britain [ToB] through former professional cyclist and 1972 Olympic bronze medal winner Ron Keeble.

"Through Ron, I met Mick Bennett, the ToB race director, and was eventually asked to become lead doctor of the race. I've worked casually with cyclists for a number of years, and also work on the Women's Tour, the London Classic and the South-East Road Racing League. I'm still a GP, too."

on YouTube shows Mark Cavendish slamming to the ground after clipping a parked car. Although he didn't break any bones, his injuries were severe enough to force him to withdraw from the race.

What goes through the mind of the doctor when the news reaches him that an incident has occurred?

"Being in the doctor's car, you're in this very unique position where you can see the whole race unfolding in front of you. Seventy-five per cent of the time, you get to see the crash directly. So I'm able to see the mechanism of injury.

"However, if I haven't seen what has happened, I'm unable to apply that knowledge. For example, if I haven't seen the rider bang his head, unless he tells me, it can be quite difficult to find that out. In some cases, you turn up to the scene of the crash and you find the bike, but not the rider, because he's

disappeared down a bank or into a bush.

"We're currently talking about having a second doctor, or a having a live feed of the race so we are able to see a crash that has happened farther up the field or an incident that has occurred while we're treating a rider. This will give us more information on what has happened, rather than turning up to the crash and having to put pieces of information together. This might be the future of the cycling."

WILL MANGAR ON...

Saddle sores



"Make sure you aren't putting too much pressure on the perineum [the

area most prone to sores] and that it's clean; make sure seat and handlebar height is comfortable; make sure you change your pair of cycling shorts daily. Always wash immediately after a long bike ride and don't forget that chamois cream can help. Here's a top tip: put your cream on with a wooden spatula and then use your hands to apply it to avoid cross-infection."

Road rash



"If you've hit the deck at speed and your crash has ripped through your

Lycra and skin has been removed, then it's worth getting it cleaned professionally because road rash can get infected very easily. Make sure you dress it properly, as there are various kinds of devoted dressings for road rash that you can buy [and which] will increase the rate of healing."

Crash checklist



"The first thing to check is your head. Is your helmet intact? Is there any

evidence that you've banged your head? Check for bleeding and lacerations, too. Are you able to weight-bear on both legs? Are you able to comfortably grip the handlebars? And are you able to ride back home? And it's not just your body. Check your bike. Is it ride-worthy? If not, call a friend or get a taxi."

Painkillers



"Pain is your body's way of telling you something isn't right. Make sure you

know what is causing the pain. Often, masking the pain and carrying on isn't the best way to manage it and could make matters worse.

"If you have an ache or a sprain, painkillers are fine, providing you haven't got an allergy and aren't made drowsy by them — possible side-effects of painkillers that could be detrimental to your health and performance on the bike."



EVENT CALENDAR

The best events countrywide throughout the winter

Saturday November 27



DISTANCE 35/56 MILES TOTAL ELEVATION 1,458 M (LONG)

HQ The Plough Inn, Pilning, BS35 4JJ

Entry £10/£15

CA says Take on the crossing of the Severn Bridge as you leave Gloucestershire for the wilds of Wales and the stunning Wye Valley, where you can take in the wide views and enjoy the last of the autumnal scenery.

tinyurl.com/qfdpxoz CF/ET/EM

Sunday November 29

WARWICKSHIRE **SNOWBALL SPINNER**

DISTANCE 47/65 MILES **TOTAL ELEVATION 723 (LONG)**

HQ Warwick Racecourse, Hampton Street, CV34 6HN

Entry £33

CA says This brand new event will keep your legs spinning late into the year as you head around the Warwickshire countryside. Looping around Stratford-upon-Avon, this gently rolling course should see you on track for a quick time so push yourself to achieve that gold standard. Hopefully there won't be any snowballs headed your way. @ukcyclingevents

www.ukcyclingevents.co.uk CF/ET/EM

KEY

Central Eastern EM East Midlands | Ireland M Isle of Man N North East N. Ireland NW North West Scotland Se South East South SW South West

W Wales WM West Midlands

Sunday December 6

WEST SUSSEX S WEST SOUCE.

DISTANCE 33/51/64 MILES **TOTAL ELEVATION 845M (LONG)**

HQ Fontwell Racecourse, BN18 OSX

Entry £23/£33

CA says As winter takes hold we don't need much of an excuse to get away from the indoor trainer, so the increasing number of winter sportives comes as a welcome relief. The roads around the South Downs are the stomping ground for this event with only one testing climb to conquer as you push towards the finish line.

@ukcyclingevents

www.ukcyclingevents.co.uk CF/ET/EM

HAMPSHIRE S HAMPSHIRE SPORTIVE

DISTANCE 12/30/50/70 MILES TOTAL ELEVATION 1,402 METRES (LONG)

HQ Queen Mary's College, Basingstoke, RG213H

Entry £7.50/£18.50

CA says December is no excuse to ease off — the long route here still offers up 1,402m of elevation, which should do nicely to keep the winter chill at bay. You'll brush the edges of the South Downs and be greeted back at HQ with a

welcome hot drink. @EvansCycles

www.evanscycles.com

Sunday January 30

SUFFOI K **NUT CRACKER SPORTIVE DISTANCE 37/53 MILES** TOTAL ELEVATION 672 METRES (LONG)

HQ Rowley Mile Racecourse, Newmarket, CB8 0TF

Entry £35

CA says If your New Year's resolution to ride more hasn't started too well, then this should

get you back on track. Rolling out of Newmarket through the quiet villages of Brinkley, Balsham and West Wickham you'll tackle shorter miles than your average event meaning you can give the legs a good spin without spending too much time in the cold.

@ ukcyclingevents

www.ukcyclingevents.co.uk

Sunday February 7

Essex

Essex THE EQUALISER

DISTANCE 39/60 MILES **TOTAL ELEVATION 818 METRES (LONG)**

HQ WESTON HOMES COMMUNITY STADIUM, CO4 5UP

Entry £35

CA says The mainly flat roads of Essex will throw up some rather unexpected lumps and bumps as vou follow the figure of eight route from Colchester into Dedham Vale AONB. While the uphill drags may not be long in length, they will certainly keep you on your toes, pushing out of the saddle as you traverse villages on the Rivers Box and Stour.

@ukcyclingevents www.ukcyclingevents.co.uk

Sunday February 14

HAMPSHIRE S ORDNANCE SURVEY INSANITY

DISTANCE 41/58 MILES

TOTAL ELEVATION 1,035 M (LONG)

HQ Sparsholt College, SO21 2NF Entry £35

CA says Snowfall prevented last year's event from taking place so let's keep our fingers crossed that this year's slightly later date will enjoy better weather. The route heads around the guiet Test Valley, over the rolling South Downs towards Kings Worthy and the Itchen Valley. The turn for home comes at Droxford where you can test your legs as the route heads

over Corhampton Down. ukcyclingevents

www.ukcyclingevents.co.uk

Saturday February 20

CAMBRIDGESHIRE WIGGLE NO EXCUSES SPORTIVE

DISTANCE 42/80 MILES TOTAL ELEVATION 716 M (LONG)

HQ Huntingdon Racecourse, PE28 4NL



Entry £35

CA says You're in for a nice fast 80 miles through the three counties of Cambridgeshire, Bedfordshire and Northamptonshire with the long route clocking up just 716 metres of total climbing. The gentle gradients are great for easing you into the new season but beware of the wind — it can be fierce in these parts!

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Sunday February 28

C HERTFORDSHIRE BUCKS ROAD SPORTIVE

DISTANCE 53/62 MILES
TOTAL ELEVATION TBC M (LONG)

HQ Chiltern Sports and Social Club, Rickmansworth, WD3 2SQ **Entry** £10/£12

CA says What better place to test your early season fitness than the

Chilterns? The organisers have promised you won't be in for an easy ride as you head for the hills along quiet lanes. With that in mind ensure you have a good set of winter tyres fitted to help minimise punctures. There will be no feed stops on the route but plenty of carbs at the HQ to keep you fuelled.

tinyurl.com/pabz3mw

WARWICKSHIRE THE RAWLINSON BRACKET

DISTANCE 70 MILES
TOTAL ELEVATION 1,300M (LONG)

HQ Gaydon, CV35 (TBC) **Entry** £17.50/£25

CA says You're in for a tough slog around Warwickshire here as you take on some of the county's infamous climbs. Edge Hill (Knowle Hill) with its 14 per cent sections, and Sun Rising Hill that peaks at 16 per cent and packs a punch with its

alpine style switchbacks, are the two of the stars of this 70-mile route.

@TheRawloBracket

www.the-rawlinson-bracket.

S KENT THE KENTISH KILLER DISTANCE 45/70 MILES

TOTAL ELEVATION 1,970M (LONG)

HQ Brands Hatch, DA3 8NG **Entry** £25

CA says This popular event is once again sold out but you can join the waiting list on the website and hope for a cancellation. This event is not for the faint-hearted as the climbs of Hubbard's, Friars Gate and Ide Hill push into gradients that offer double digits and it doesn't get any easier. Just 13 miles from home and Sundridge Hill will have your legs screaming. @kentishkiller

www.gsavanti.co.uk/kentishkiller/

Don't miss out

Sunday May 8

NW

CUMBRIA THE FRED

WHITTON

Closing date Sunday January 17, 2016

DISTANCE 112 MILES TOTAL ELEVATION 3,950M (LONG)

HQ Showfield, Grasmere, LA22 9SL

Entry £TBC

CA says If this infamous event is not already on your riding bucket list then it should be. To be in with a chance of ticking it off then head to the website. Entry is via a 'lottery' that opens on Monday January 4 and closes Sunday Jan 17. If you're lucky enough to bag a spot let the training commence; nearly 4,000m of ascent over 112 miles make this a beast of a ride.

www.fredwhittonchallenge.



Sunday July 10



DISTANCE 91 MILES TOTAL ELEVATION 3,500M (LONG)

HQ Megève, France **Entry** Various packages. From €1,200

CA says Spots on this year's event are now only available via a package that includes accommodation, transfers, plus event entry. You just need to organise your flight. Oh, and don't forget to put in some training as there is still the small matter of four Alpine cols to get over.

@letapedutour

www.letapedutour.com



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CYCLING ACTIVE IS PROUD TO SUPPORT THE BLOODWISE CHARITY



My toughest day



Rob Hayles 2008 National Road Race Championships

his photo was taken just after I'd won the 2008 National Road Race Championships, and it was a race I knew I was going to win. With about 75km to go I was actually going through in my head what my celebration was going to be when I crossed the line because I knew I was going so well. I'd got in a break, there were about 20 guys away, we were well clear of the rest of the peloton and I said: "We haven't even started yet." Most of the guys were on the rivet and I was just on fire.

But then I attacked with about 20km to go, the others were starting to reel me in and I was starting to cramp. I was so angry with myself because I felt at that point "I should be winning this but I've blown it."

I kept looking and I thought, "I've just got to ride tempo and let them bring me back."

Once they caught me, they were attacking each other and I was hurting but it didn't really matter because I was able to follow in the wheels for a few kilometres. Then I think it was Dean Downing, Pete Kennaugh and Dan Lloyd with me. At that point I realised, although I was hurting and I was in a box, these guys are as well. So that gave me the confidence to attack on the run-in and

I got the gap on Pete but he was coming at me at the finish, it was like a drag race. I just had to dig in and hope that he didn't catch me. It was tough, 220-odd kilometres and quite rolling. After thinking I'd blown it, the win felt surreal. We were right in the middle of track prep and selection for the Olympics as well so I was on the track the next morning.

Rob Hayles is a three-time Olympic medallist and double world champion on the track. He's now a pundit for TV and radio while also making time to hone his skills as a coffee connoisseur and garden shed inventor. He was speaking to Rebecca Charlton.

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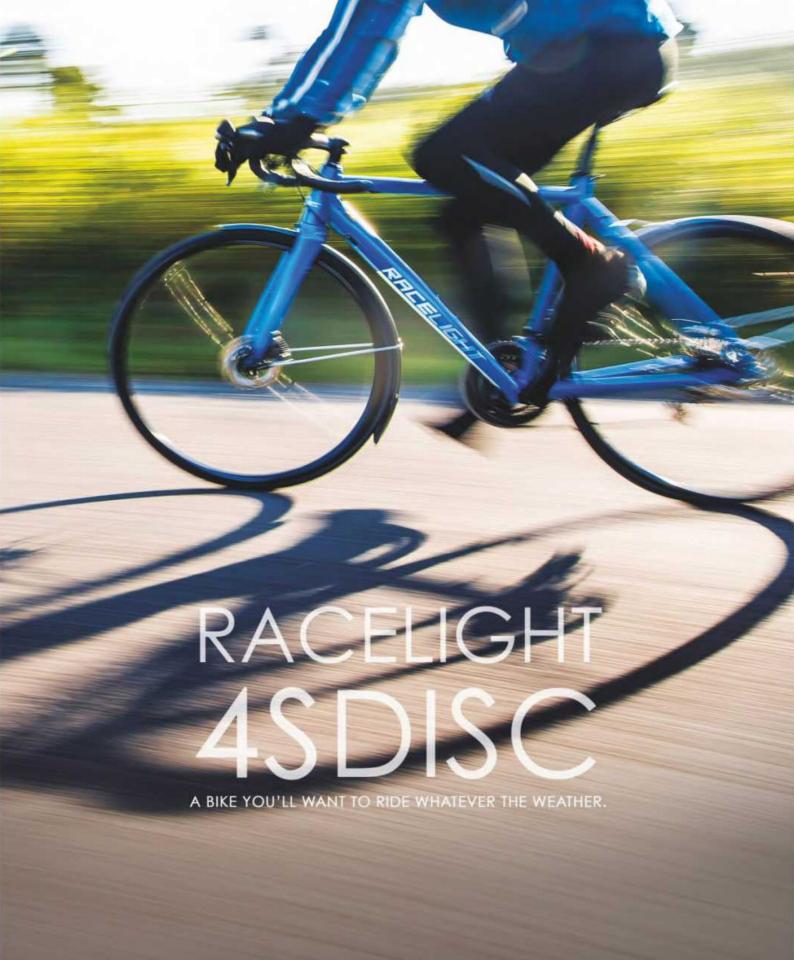




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